

FILE 'HOME' ENTERED AT 15:16:54 ON 26 MAR 2001

=> file medline

COST IN U.S. DOLLARS

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ENTRY
0.15

TOTAL
SESSION
0.15

FULL ESTIMATED COST

FILE 'MEDLINE' ENTERED AT 15:17:07 ON 26 MAR 2001

FILE LAST UPDATED: 22 MAR 2001 (20010322/UP). FILE COVERS 1958 TO DATE.

MEDLINE now contains new records from the former NLM HEALTH STAR database. These records have an Entry Date and Update Date of 20010223.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2001 vocabulary. Enter HELP THESAURUS for details.

The OLD MEDLINE file segment now contains data from 1958 through 1965. Enter HELP CONTENT for details.

Left, right, and simultaneous left and right truncation are available in the Basic Index. See HELP SFIELDS for details.

THIS FILE CONTAINS CAS REGISTRY NUMBERS FOR EASY AND ACCURATE SUBSTANCE IDENTIFICATION.

MEDLINE has been updated with new records for the 2001 production year (20010322/UP). NLM is still in the process of preparing data. Therefore, regular updates to the file are not in place. As soon as NLM makes the regular updates available, we will process the update.

=> s aboudy

L1 1 ABOUDY

=> d 11 bib ab

L1 ANSWER 1 OF 1 MEDLINE

AN 93352726 MEDLINE

DN 93352726

TI Identification of feline- and canine-like rotaviruses isolated from human

by restriction fragment length polymorphism assay.

AU Winer A; Shif I; Silberstein I; Rudich H; Aboudy Y; Mendelson E; Chikhai L; Nakagomi T; Nakagomi O

CS Central Virology laboratory, Chaim Sheba Medical Center, Tel-Hashomer, Israel..

SO JOURNAL OF CLINICAL MICROBIOLOGY, (1993 Jul) 31 (7) 1783-7.

Journal code: HSH. ISSN: 0095-1137.

CI United States

IT Journal; Article; (JOURNAL ARTICLE)

LA English

to differentiate human serotype 3 rotaviruses from animal serotype 3 rotaviruses. On the basis of similarities or differences in HinfI and

DdeI

restriction profiles, unusual group A serotype 3 human rotaviruses that belonged to subgroup I were shown to be of feline and canine origin. By this approach, the new human rotavirus isolates 5193, AU-387, AU-720, AU-785 and AU-1115 were shown to resemble certain feline-like human rotaviruses. Similar results were previously obtained by Nakagomi et al. (6). Nakagomi, A. Hoshima, Y. Aboudy, I. Shif, M. Mochizuki, T. Nakagomi, and T. Gottlieb-Stematsky. J. Clin. Microbiol. 28:1198-1203, 1990) by using RNA-RNA cross hybridization with established feline rotaviruses. The restriction fragment length polymorphism assay can provide fast and valuable information on the interspecies transmission of rotaviruses in nature.

=> rotavirus

ROTAVIRUS IS NOT A RECOGNIZED COMMAND

The previous command name entered was not recognized by the system. For a list of commands available to you in the current file, enter "HELP COMMANDS" at an arrow prompt (=>).

=> s rotavirus

L2 5698 ROTAVIRUS

=> s monoclonal

L3 150723 MONOCLONAL

=> s vero

L4 6827 VERO

=> s serotype?

L5 17725 SEROTYPE?

=> s vaccine?

L6 90308 VACCINE?

=> s L2 and L3 and L4 and L5 and L6

L7 0 L2 AND L3 AND L4 AND L5 AND L6

=> s L2 and L3

L8 457 L2 AND L3

=> s L3 and L4

L9 1 L3 AND L4

=> d 10 bib ab

L6 ANSWER 1 OF 1 MEDLINE

1990

CS Department of Population Medicine, Ontario Veterinary College, University
of Guelph..
SO CANADIAN JOURNAL OF VETERINARY RESEARCH, (1992 Jul) 56 (3) 184-8.
Journal code: CKL. ISSN: 0836-9000.
CY Canada
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 1992
AB A case-control study of diarrheal disease in veal calves was conducted
over a three month period on a single large veal farm in southern
Ontario.

One hundred diarrheic calves (cases) were identified by visual
examination
of their feces. Each case was matched to two nondiarrhetic controls from
the same room on the same day, and a fecal sample was obtained from each
animal. Fecal consistency of cases and controls was observed daily for
one
week following sample collection. Control calves which developed diarrhea
during that period were excluded from the study. Breed, sex and the date
and nature of antimicrobial drugs administered to each calf were
recorded.

Moisture content of fecal samples was measured by weighing samples before
and after oven drying. Samples were screened for verocytotoxigenic
Escherichia coli (VTEC) using a **Vero** cell assay, for
enterotoxigenic *E. coli* (ETEC) using an immunoblot procedure with
anti-K99

monoclonal antibodies, and for *Salmonella* species using modified
semi-solid Rappaport-Vassiliadis medium. A latex agglutination test was
used to detect rotaviruses, and samples were examined for cryptosporidia
using sucrose wet mounts. No VTEC were identified in cases or controls.
One calf was positive for *Salmonella* and three were positive for ETEC.
Rotaviruses were detected in four cases and four controls. A significant
positive association was found between diarrhea and infection with
Cryptosporidium. This study thus provided no evidence of an association
between diarrhea and infection with either VTEC, ETEC, *Salmonella* spp. or
rotaviruses in the population examined. On the other hand our results do
suggest that *Cryptosporidium* infection may promote transient diarrheal
disease in veal calves in Ontario.

=> s 12 and 13 and 15

L10 226 L2 AND L3 AND L5

=> s 110 and 16

L11 32 L10 AND L6

=> d 111 and 2 bib ab

L11 ANSWER 1 OF 32 MEDLINE

AN 2000499944 MEDLINE

DN 20436056

TI Annual report of the **Rotavirus** Surveillance Programme.
1999/2000.

AU Masendycz P; Bogdanovic-Sakran N; Palombo E; Bishop R; Barnes G

JS National Rotavirus Reference Centre, Royal Children's Hospital,
Melbourne.

LA English
 EM 200012
 EW 20001204
 AB The National **Rotavirus** Reference Centre has conducted **rotavirus** surveillance by means of a collaborative laboratory based initiative started in June 1999. The **serotypes** of **rotaviruses** that lead to the hospitalisation of children with acute diarrhoea were determined from June 1999 to May 2000. We examined 1126 **rotavirus** specimens using a combination of **monoclonal** antibody immunoassay, reverse transcription-polymerase chain reaction, and hybridisation. The four most common **serotypes** G1-G4 were represented. More than 50% of isolates tested were **serotype** G1, with **serotype** G1 being represented in most centres Australia-wide. **Serotype** G9 **rotaviruses** were identified for the first time in Australia, and were second in importance with 10% of samples tested. The significant presence of G9 viruses throughout Australia suggests the emergence of a new **serotype** and has implications for current **rotavirus** vaccine strategies that target **serotypes** G1-G4.

L11 ANSWER 2 OF 32 MEDLINE
 AN 2000402093 MEDLINE
 DN 20457088
 TI **Serotypes** and subgroups of **rotavirus** isolated from children in central Brazil.
 AU Cardoso das D; Soares C M; Azevedo M S; Leite J P; Munford V; Pacz M L
 GE Lab. Micrologia/IETSP/UFG-Goiania-GO, Brazil.. divina@netgo.com.br
 SO JOURNAL OF HEALTH, POPULATION, AND NUTRITION, (2000 Jun) 18 (1) 39-43.
 Journal code: DTT. ISSN: 1606-0997.
 CY Bangladesh
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 200012
 AB Group A **rotavirus**, obtained from children of Goiania, Brazil, during 1987-1994, were analyzed for subgroup and G **serotype** by enzyme-linked immunosorbent assay with **monoclonal** antibodies. The index of serotyping obtained was 61.4% with the following proportions:
 G1--19.7%, G2--28.0%, G3--9.8%, G4--1.5%, and G5--2.3%. It was observed that G1 occurred from 1987 to 1989 and from 1993 to 1994, and G2 from 1990 to 1993. About 94% of the samples (85/90) could be subgrouped with the following results: 55.5% for SG II, 7.8% SG I, and 31.1% for SG non-I-non-II. Unusual relationship patterns were also detected among **serotypes**, subgroups, and profiles of electropherotypes in 57.0% of the samples: 20 of them were G2/SG II/"long" profile. The results suggest that variation in temporal and regional characteristics should be considered in the development of **rotavirus** vaccine.

L11 ANSWER 3 OF 32 MEDLINE
 AN 2000407085 MEDLINE
 DN 20047085
 TI Comparative studies of human **rotavirus** **serotype** G8 strains recovered in South Africa and the United Kingdom.
 AU Steele A D; Parker S P; Peenze I; Pager C T; Taylor M B; Cubitt W P
 SO KNCV/MEDUNSA Diarrhoeal Pathogens Research Unit, PO Box 173, Medunsa 0214,
 Pretoria, South Africa. gip+ale@medunsa.ac.za

FS Priority Journals: Cancer Journals
OS GENBANK-AF143688; GENBANK-AF143689; GENBANK-AF143690
EM 210000
EW 210002-4

AB Epidemiological studies on the VP7 **serotype** prevalence of human rotaviruses in South Africa and the United Kingdom identified several strains which could not be **serotyped** as G1-G4 by **monoclonal** antibodies. Further analysis of these strains with a G6-specific **monoclonal** antibody and with probes for human rotaviruses confirmed them as G3 rotaviruses. These G3 strains exhibited

a

high degree of sequence identity when compared with each other and with other **rotavirus** G3 strains. Five South African strains were further characterized as VP6 subgroup I, but with a long RNA electropherotype, which is similar to the G1 strains previously isolated in Finland. In the UK strains, one was VP6 subgroup II with a long RNA electropherotype (similar to the Italian G8 strain). The other two were subgroup I with a short RNA electropherotype. None of these strains exhibited the super-short RNA electropherotype described in the prototype G8 strains recovered from Indonesia (G8M).

LI1 ANSWER 4 OF 32 MEDLINE

AN 19981-0785 MEDLINE

DN 942627-5

TI Evidence of high-frequency genomic reassortment of group A **rotavirus** strains in Bangladesh: emergence of type G9 in 1995.

AU Unicomb L E; Podder S; Gentsch J R; Woods P A; Hasan K J; Faruque A S; Albert M J; Glass R I

CS International Centre for Diarrhoeal Disease Research, Bangladesh, Dhaka, Bangladesh.

SO JOURNAL OF CLINICAL MICROBIOLOGY, (1999 Jun) 37 (6) 1835-41.
Journal code: HSH. ISSN: 0095-1137.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 199807

EW 19980814

AB We characterized 1,584 **rotavirus** (RV) strains collected in Bangladesh from 1992 to 1997 to assess temporal changes in G type and to study the most common G and P types using reverse transcription-PCR, oligonucleotide probe hybridization, and **monoclonal** antibody-based enzyme immunoassay. Results from this study combined with our previous findings from 1987 to 1991 (P. Binsan et al., J. Clin. Microbiol. 29:862-868, 1991, and L. E. Unicomb et al., Arch. Virol. 132:201-208, 1993) (n = 2,515 fecal specimens) demonstrated that the distribution of the four major G types varied from year to year, types G1 to G4 constituted 91% of all strains tested (n = 1,364), and type G4 was the most prevalent type (32%), followed by type G2 (17%). Of 351 strains tested for both G and P types, three globally common types, type P[6], type P[4], G2, and type P[8], G4, comprised 41% (n = 15%) of the strains, although eight other strains were circulating during the study period. Mixed G and/or P types were found in 23% (n = 78%) of the samples tested. Type G9 RVs that were genotype P[6] and P[8] with both long and short electrophoretic patterns emerged in 1995. The finding of five different genotypes among G9 strains, of which three were frequently detected, suggests that they may have an unusual propensity for reassortment that extends that found among the common G types. We also detected antigenic changes in **serotypes** G1 and G4 over time, as indicated by the

81.

monoclonal antibodies.

L11 ANSWER 5 OF 32 MEDLINE
 AN 1999010779 MEDLINE
 DN 99019779
 TI Development of a fluorescent focus identification assay using **serotype-specific monoclonal** antibodies for detection and quantitation of rotaviruses in a tetravalent **rotavirus vaccine**.
 AU Yang L P; Goldberg K M; Ma X D; Magargyle W; Rappaport R
 CS Wyeth Ayerst Research, Philadelphia, Pennsylvania 19101, USA.
 SO CLINICAL AND DIAGNOSTIC LABORATORY IMMUNOLOGY, (1999 Nov) 5 (6) 780-3.
 Journal code: CB7. ISSN: 1071-412X.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 199901
 EW 19990104
 AB A fluorescent focus identification assay (FFIDA) was developed for use in experimental studies and for quantitation of the components in a tetravalent live oral **rotavirus vaccine**. The assay utilizes four **serotype-specific neutralizing monoclonal** antibodies (MAb) to detect and quantify individual rotaviruses by immunofluorescence staining of fixed virus-infected monkey kidney cells. In mixed virus infections, all four MAb, W1 (**serotype 1**), 1C10 (**serotype 2**), F1 (**serotype 3**), and S4 (**serotype 4**), specifically stain the relevant homologous **serotype** without exhibiting any cross-reactivity against the other **serotypes**. Furthermore, the test is sensitive enough to differentiate at least twofold (0.3 log) differences in virus titer. The results of testing four individual experimental **vaccine** lots three or more consecutive times showed that all four lots contained similar proportions of the four **vaccine** strains as detected by the classical plaque neutralization identification test. The rapidity and efficiency of the FFIDA are desirable attributes that make it suitable for use in studies requiring identification and quantitation of one or more of the four major **rotavirus serotypes**.

L11 ANSWER 6 OF 32 MEDLINE
 AN 95255849 MEDLINE
 DN 95255849
 TI The Salmonella ompC gene: structure and use as a carrier for heterologous sequences.
 AU Puente J L; Juarez D; Bobadilla M; Arias C F; Calva E
 CS Departamento de Microbiologia Molecular, Universidad Nacional Autonoma de Mexico, Cuernavaca.
 SO GENE, 1995 Apr 14) 156 (1) 1-9.
 Journal code: FGP. ISSN: 0378-4119.
 CY Mexico
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 199504
 AB The Salmonella typhi (St) ompC gene codes for a major outer membrane protein (OMP) that is highly expressed in both low and high osmolarity.
 By
 hybridization studies with the entire gene or with segments thereof, ompC was found to be highly conserved within 11 different Salmonella **serotypes**, with the exception of S. arizonae. The study included several St isolates from Mexico and Indonesia. Variation was only

preparations (by enzyme-linked immunosorbent assay; ELISA) or intact cells

by ELISA and immunogold-labelling), indicating that regions c and f are oriented towards the cell surface and are probably exposed. As has been shown before for other regulated OMP, this experimental approach could be useful for the presentation of heterologous epitopes in order to gain knowledge about porin topology, for testing the effect of altered porin surface epitopes on bacterial physiology, or else, in the development of multivalent vaccines.

LI1 ANSWER 7 OF 82 MEDLINE

AN 95189251 MEDLINE

DN 95189251

TI Epidemiology, subgroups and serotypes of rotavirus diarrhea in north Indian communities.

AU Tachia S K; Singh V; Kanwar S S; Mehta S

CS Department of Gastroenterology, Postgraduate Institute of Medical Education and Research, Chandigarh..

SO INDIAN PEDIATRICS, (1994 Jan) 31 (1) 27-33.

Journal code: GME. ISSN: 0019-6061.

CY India

DT Journal; Article; (JOURNAL ARTICLE)

LA English

EM 199506

AB To know prevalence of **rotavirus** diarrhea subgroups and **serotypes**, a prospective study was conducted in rural, periurban and urban communities at Chandigarh. Weekly surveillance for diarrheal episodes was carried out in 110 families each from rural, periurban and urban localities constituting 524 children < 5 years of age from October, 1988 to February, 1991. Stool samples of 218 diarrheal episodes occurring in 115 children were subjected to **rotavirus** detection by ELISA. **Rotavirus** positive samples were further analyzed for subgroups and **serotypes** using specific monoclonal antibodies. Overall prevalence of **rotavirus** diarrhea was 4.3% (25/584). **Rotavirus** constituted 11.5% (25/218) of total diarrheal episodes and 22% (25/115) among the children affected with acute diarrhea. Among rural, periurban and urban communities, the overall prevalences of **rotavirus** diarrhea were 7.3%, 3.2% and 2.3% and episode related prevalences of 31.8%, 7.4% and 5%, respectively (chi 2 test for trend was highly significant from rural to periurban to urban localities). Forty

per

cent (10/25 of **rotavirus** positive samples were subgroup I and 60% (15/25) sub-group II. Of the 25 **rotavirus** strains, 40% (10) were **serotype** 2, 24% (n = 6) **serotype** 3 and 36% (n = 9) **serotype** 4. No definite temporal or seasonal pattern of **rotavirus** was observed; however, more of **rotavirus** diarrheal episodes (16%) occurred during winter season. Subgroups and **serotypes** were observed to cocirculate during the **rotavirus** episodes. Demonstration of **serotypes** in this field study imply that the vaccine to be used in our country must be cross protective to have an effective impact on **rotavirus** infection. (ABSTRACT TRUNCATED AT 250 WORDS)

LI1 ANSWER 8 OF 82 MEDLINE

AN 95150413 MEDLINE

DN 95150413

TI Serotyping of human rotaviruses in the Tokyo area (1990-1993) by enzyme immunoassay with monoclonal antibodies and by reverse transcription and polymerase chain reaction amplification.

AU Tachikawa H; Makoyama A; Hasegawa A; Nishimura S; Kishiki H; Boshu K

CS Department of Pediatrics, National Children's Medical Center, Tokyo.

LA English.
 FS Priority Journal
 EM 199505
 AB Serotyping of human **rotavirus** in the Tokyo area was conducted from 1990 to 1993 by enzyme immunoassay with **monoclonal** antibodies (EIA-MAbs) against VP7 and by reverse transcription and polymerase chain reaction (RT-PCR) amplification of the VP4 and VP7 genes.
 The results by EIA-MAbs were very similar to those obtained by RT-PCR. Evidence of intraserotypic variations was suggested because strains of undetermined **serotypes** were detected by either EIA-MAb or RT-PCR. This kind of study is required for **vaccine** development.

L11 ANSWER 9 OF 32 MEDLINE
 AN 95063305 MEDLINE
 DN 95063305
 TI [Frequency of **serotype** G **rotavirus** isolated from children with diarrhea in Merida, Yucatan, Mexico].
 Frecuencia de serotipos G de **rotavirus** aislados de niños con diarrea en Merida, Yucatan, Mexico.
 AU Gonzalez-Losa M R; Puerto-Solis M; Polanco-Marin G G; Peniche-Rodriguez R;
 Puerto F I
 CS Departamento de Virologia del Centro de Investigaciones Regionales, Universidad Autonoma de Yucatan, Merida..
 SO REVISTA DE INVESTIGACION CLINICA. (1994 May-June) 46 (3) 215-9.
 Journal code: SCH. ISSN: 0034-8376.
 CY Mexico
 DT Journal; Article; (JOURNAL ARTICLE)
 LA Spanish
 EM 199502
 AB During a period of six years (1989-1990), **rotavirus** G **serotypes** were investigated in 104 fecal samples isolates according to an immune enzyme assay using specific **monoclonal** antibodies against **serotypes** 1, 2, 3, and 4 of the VP7. The **serotypes** were established in 65 samples (62.5%) and could not be determined in 39 samples. In the 65 classified **serotypes**, 7 (6.7%) were found to belong to **serotype** 1, 23 (22.1%) to **serotype** 2, 12 (11.5%) to **serotype** 3, and 23 (22.1%) to **serotype** 4. The occurrence of the four **serotypes** during the six years was: **serotype** 3 was present in three of the six years; **serotype** 2 was detected in two epidemic outbreaks (1989 and 1990); **serotype** 3 appeared in the second year and was seen in the remainder of the study; and **serotype** 4 was present in the six years. We conclude that the four **serotypes** occur in our population and that future efforts to test the efficacy of any **vaccine** against this virus should evaluate a protective response against the four **serotypes**.

L11 ANSWER 10 OF 32 MEDLINE
 AN 94201313 MEDLINE
 DN 94201313
 TI [Characterization of antigenic types of circulating rotaviruses in Mendoza, Argentina based on typing of the external VP7 capsid protein].
 Caracterización de tipos antigenicos de **rotavirus** circulantes en Mendoza, Argentina en base a tipificación de la proteína de la capsida externa VP7.
 AU Espul G; Chello H; Navarita L M; Mamani H; O'Ryan M; O'Ryan M
 CS Departamento de Biopuntura Clínica, Hospital Central de Mendoza, Argentina

(MULTICENTER STUDY)
LA Spanish
FS Priority Journals
EM 199409
AB

Rotavirus is one of the most common etiologic agents of acute diarrhea in childhood. Understanding the immunologic mechanisms involved in **rotavirus** diseases, including knowledge on seasonal and geographic antigenic variations may be crucial for **vaccine** development. A **monoclonal** antibody based ELISA specific for antigenic domains in the outer capsid protein VP7 has been developed and used widely in the past years. We studied the **rotavirus** VP7-**serotype** epidemiology causing diarrhea in children who consulted at two main hospitals of Mendoza, Argentina over a 20 month period. A total of 227 cases of diarrhea were identified, 45 of which (20%) were **rotavirus** positive. We're able to **serotype** 43 viruses (96%), 42 VP7-type 1 and one VP7-type 3. The VP7-type 3 was detected towards the end of the second year, possibly representing a new incoming VP7-type. Three electropherotype patterns were identified, two corresponding to VP7-type epidemiology in Mendoza, Argentina seems to be characterized by a relatively homogeneous pattern of circulation with a strong predominance of VP7-type 1 viruses, at least during the 20 month period studied, in contrast to what has been reported in larger, more cosmopolitan cities like Buenos Aires.

L11 ANSWER 11 OF 32 MEDLINE

AN 94163597 MEDLINE

DN 94163597

TI Immunogens of rotaviruses.

AU Paul P S; Lyoo Y S

CS Veterinary Medical Research Institute, College of Veterinary Medicine, Iowa State University, Ames 50011..

SO VETERINARY MICROBIOLOGY, (1993 Nov) 37 (3-4) 299-317. Ref: 109
Journal code: XEW. ISSN: 0878-1135.

CY Netherlands

DT Journal; Article; (JOURNAL ARTICLE)

General Review; (REVIEW)

(REVIEW, TUTORIAL)

LA English

FS Priority Journals

EM 199406

AB Rotaviruses cause gastroenteritis in neonates of many animal species including cattle, swine, horses, dogs, cats, chickens and turkeys. Rotavirions are nonenveloped, are about 75 nm in diameter, have a double capsid, and contain 11 double-stranded RNA segments as their genome. Several antigenically distinct groups of rotaviruses have been identified and have been alphabetically designated as A through G. Group A rotaviruses were the first group of rotaviruses isolated and are the most commonly detected rotaviruses in diarrheic animals. Group A rotaviruses have two surface proteins, VP4 and VP7, both of which are important in **serotype** determination and in inducing neutralizing antibodies and protective immunity. Multiple **serotypes** of group A **rotavirus** based on glycoprotein VP7 (designated as G types) and based on VP4 (P types) have been identified. The immune response to rotaviruses is essentially **serotype** specific, however, cross-reactive or heterotypic epitopes have also been identified. Currently acceptable methods for immunogen quantitation include the induction of neutralizing antibody in host or laboratory animals. The in vivo efficacy of **vaccines** against **rotavirus**-associated gastroenteritis remains the standard method against which in vitro methods are

in vitro quantitation of rotaviral immunogens.

L11 ANSWER 12 OF 31 MEDLINE
AN 93107200 MEDLINE
DN 93107200
TI Serotypic and genotypic characterization of human **serotype 10** rotaviruses from asymptomatic neonates.
AU Dunn S J; Greenberg H B; Ward R L; Nakagomi O; Burns J W; Vo P T; Pax K A;
Das M; Gowda K; Rao C D
CS Department of Medicine, Stanford University, California 94305..
NO AI30340 (NIAID)
PR07050 (NIDDK)
R01 AI21632 (NIAID)
SO JOURNAL OF CLINICAL MICROBIOLOGY, (1993 Jan) 31 (1) 105-9.
Journal code: HSH. ISSN: 0095-1137.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English.
ES Priority Journals
EM 199303
AB Human rotaviruses were isolated from asymptomatic neonates at various hospitals and clinics in the city of Bangalore, India, and were found to be subgroup I specific and possess long RNA patterns (M. Sukumaran, K. Gowda, P. P. Maiya, T. P. Srinivas, M. S. Kumar, S. Aijaz, R. R. Reddy, L. Padilla, H. B. Greenberg, and C. D. Rao, Arch. Virol. 126:239-251, 1992). Three of these strains were adapted to tissue culture and found by **serotype** analysis and neutralization assays to be of **serotype 10**, a **serotype** commonly found in cattle but infrequently found in humans and not previously identified in neonates.
By RNA-RNA hybridization, a high level of relatedness to a **serotype 10** bovine **rotavirus** strain and a low-to-medium level of relatedness to a human **rotavirus** strain were observed. Since this human isolate shares a genogroup with bovine **rotavirus**, it is likely that it originated by interspecies transmission. A human **rotavirus** strain isolated from asymptomatic neonates and similar to bovine **rotavirus** might represent a good **vaccine** candidate.

L11 ANSWER 13 OF 32 MEDLINE
AN 93057302 MEDLINE
DN 93057302
TI Typing of human group A **rotavirus** with alkaline phosphatase-labeled oligonucleotide probes.
AU Sethabutr O; Hanchaisay S; Laxomboon U; Bishop R F; Holmes I H; Echeverria F
CS Armed Forces Research Institute of Medical Sciences, Children's Hospital, Bangkok, Thailand..
SO JOURNAL OF MEDICAL VIROLOGY, (1992 Jul) 57 (3) 193-6.
Journal code: JCM. ISSN: 0146-6715.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English.
ES Priority Journals
EM 199302
AB **Rotavirus** (RV) in stools of children less than 1 year of age who died in Bangkok in 1986 were **serotyped** by monoclonal enzyme immunoassay (MEIA). RNA extracted from these

were **serotyped** by MEIA <1 less than 0.001. Of 68 specimens that contained only VP7 **serotype** (G-type), as identified by MEIA, 94 (16/17) of G1, 90 (27/30) of G2, 57 (4/7) of G3, and 36 (5/14) of G4 RV hybridized with the AP-labeled HuG1Ac, HuG2Ac, HuG3Ac, and HuG4Ac oligonucleotides, respectively. The probes for G1, 2, 3, and 4 RV were specific for each G type. The results of hybridizing specimens with 32P- and AP-labeled oligonucleotides were similar. After transcription and amplification of cDNA of gene 9, AP-labeled RV G type specific oligonucleotides hybridized with 90 (134/143) of RV specimens. The high sensitivity of these nonimmunological techniques could be of value in identifying G types of RV during **vaccine** trials.

L11 ANSWER 14 OF 32 MEDLINE

AN 92242494 MEDLINE

DN 92242494

TI Distribution of **serotypes** of human **rotavirus** in different populations.

AU Woods P A; Gentsch J; Gouvea V; Mata L; Santosham M; Bai Z S; Urasawa S; Glass P I

CS Division of Viral and Rickettsial Diseases, Centers for Disease Control, Atlanta, Georgia 30333.

SO JOURNAL OF CLINICAL MICROBIOLOGY, (1992 Apr) 30 (4) 731-5.

Journal code: HSH. ISSN: 0095-1137.

CI United States

DT Journal: Article: (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 199205

AB Serotyping is a useful tool to study the epidemiologic characteristics of rotaviruses in large populations and to assess the need for a **vaccine** to protect against all strains. By using an enzyme immunoassay with **serotype**-specific **monoclonal** antibodies to the four most common **rotavirus serotypes**, we analyzed 1,183 **rotavirus**-positive specimens from 16 stool collections in eight countries on four continents that were obtained from 1978 to 1989. Of the 926 strains (78%) that could be **serotyped**, 43% were **serotype** 1, 3% were **serotype** 2, 15% were **serotype** 3, and 7% were **serotype** 4. Twenty-two percent had insufficient numbers of double-shelled virus particles to react with the **monoclonal** antibody of the VP4 **rotavirus** protein and therefore could not be **serotyped**. Our results indicate that **vaccines** being developed must provide the greatest coverage against **serotype** 1 and that the **serotype** distribution cannot be predicted currently by the geographic area or prevalence in the preceding year.

L11 ANSWER 13 OF 32 MEDLINE

AN 911996-2 MEDLINE

DN 911996-2

TI Isolation and characterization of two distinct human **rotavirus** strains with G6 specificity.

AU Gerna R; Marziani A; Paoletti M; Zanetti G; Miranville P; Brown W H; Hoshino Y; Flores J

CS Institute of Infectious Diseases, University of Pavia, Italy..

SO JOURNAL OF CLINICAL MICROBIOLOGY, (1992 Jan) 30 (1) 9-16.

Journal code: HSH. ISSN: 0095-1137.

CI United States

DT Journal: Article: (JOURNAL ARTICLE)

LA English

FS Priority Journals

serotypes

isolated 3 months apart from two children with acute gastroenteritis in Sicily, southern Italy, in the winter season of 1987 and 1988. The HRV isolates were adapted to growth in cell cultures and were then characterized by neutralization and RNA-RNA (Northern blot)

hybridization.

Cross-neutralization studies with type-specific immune sera to RV **serotypes** 1 to 10 showed the antigenic relatedness of the two strains with **serotype** 6 bovine strains UK and NCDV.

Monoclonal antibodies to VP7 of UK were able to recognize UK and NCDV strains as well as both HRV isolates. Cross-hybridization studies showed a genetic relatedness of PA161 and PA162 to bovine strains for all genes except gene 4. Gene 4 of PA161 appeared to be genetically related

to

that of AU24 (a human strain of subgroup I and with **serotype** G3 specificity that belongs to a feline genogroup), whereas gene 4 of PA162 appeared to be unique, yet it was related to gene 4 of two recently reported subgroup I HRV strains, one (PA710) with **serotype** G3 specificity and the other (HAL1271) with **serotype** G3 specificity. The new HRV strains must be taken into consideration when deciding strategies for the development of an effective RV vaccine

L11 ANSWER 16 OF 32 MEDLINE

AN 92065427 MEDLINE

DN 92065427

TI Identification of VP7 epitopes associated with protection against human **rotavirus** illness or shedding in volunteers.

AU Green K Y; Kapikian A Z

CS Epidemiology Section, National Institute of Allergy and Infectious Diseases, Bethesda, Maryland 20892.

SO JOURNAL OF VIROLOGY, (1992 Jan) 65 (1) 543-53.

Journal code: JCV. ISSN: 0022-538X.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English.

FS Priority Journals; Cancer Journals

EM 199213

AB Sera from 17 of 18 adult volunteers challenged with a virulent **serotype** 1 **rotavirus** strain (D) were examined for prechallenge antibody levels against several well-defined **rotavirus** VP7 and VP4 neutralization epitopes by a competitive epitope-blocking immunoassay (EBA) in order to determine whether correlates of resistance to diarrheal illness could be identified. The presence of prechallenge serum antibody at a titer of greater than or equal to 1:20 that blocked the binding of a **serotype** 1 VP7-specific monoclonal antibody (designated 2C9) that maps to amino acid residue 94 in antigenic site A on the **serotype** 1 VP7 was significantly associated with resistance to illness or shedding (P less than 0.001) or illness and shedding (P less than 0.01) following challenge with the **serotype** 1 virus. In addition, an EBA antibody titer of greater than or equal to 1:20 in prechallenge serum against a **serotype** 3 VP7-specific epitope identified by monoclonal antibody 9F4.159 that maps to amino acid 94 on the **serotype** 3 VP7 was also significantly associated with resistance to illness or shedding (P = 0.02), with a trend for protection against illness and shedding. A trend was also noted between the presence of EBA antibody against a cross-reactive VP4 epitope common to many human **rotavirus** strains, including the challenge virus, or a rhesus monkey **rotavirus** strain-specific VP4 antigenic site, and resistance to illness or shedding. These data confirm that the presence

suggest that antigenic site A on the **rotavirus** VP7, composed of amino acids 87-96, may be involved in the formation of a major protective epitope. Further study of the role of this epitope in the development of homotypic and heterotypic immunity to rotaviruses

following

natural or **vaccine**-induced infection may be important in the development of strategies for control of **rotavirus** diarrheal disease.

L11 ANSWER 17 OF 32 MEDLINE

AN 91352997 MEDLINE

DN 91352997

TI Homotypic and heterotypic serum and milk antibody to **rotavirus** in normal, infected and vaccinated horses.

AU Browning G F; Chalmers R M; Sale C S; Fitzgerald T A; Snodgrass D R

CS Mordekin Research Institute, Edinburgh, UK.

SO VETERINARY MICROBIOLOGY, (1991 May) 27 (3-4) 231-44.

Journal code: XEW. ISSN: 0875-1135.

CY Netherlands

DT Journal; Article; (JOURNAL ARTICLE)

LA English.

FS Priority Journals

EM 199115

AB The homotypic and heterotypic antibody response to **rotavirus** was determined in three pony mares and their foals. The normal concentrations of anti-**rotavirus** antibodies in mares' milk and mares' and foals' serum over the first 10 weeks post-partum were measured using IgA, IgG and **rotavirus** serotype-specific enzyme linked immunosorbent assays. Experimental infection of the foals with **serotype** 3 equine **rotavirus** produced a rapid, **serotype**-specific response which peaked 10 days after infection and a slower heterotypic response which peaked 32 days later. In contrast,

vaccination of the mares with an inactivated, adjuvanted **serotype** 6 bovine **rotavirus** produced a heterotypic response similar to that of the homotypic response in both serum and milk, although the predominant response in serum was IgG, while in milk it was IgA. These results suggest that non **serotype**-restricted passive protection of foals against **rotavirus** may be achieved by parenteral vaccination of mares.

L11 ANSWER 18 OF 32 MEDLINE

AN 91244976 MEDLINE

DN 91244976

TI Antibody response to **serotype**-specific and cross-reactive neutralization epitopes on VP4 and VP7 after **rotavirus** infection or vaccination.

AU Taniguchi K; Urasawa T; Kobayashi N; Ahmed M U; Adachi N; Chiba S;

Urasawa

Urasawa

A Department of Hygiene, Jippei Medical College, Japan.

SO JOURNAL OF CLINICAL MICROBIOLOGY, (1991 May) 29 (5) 944-50.

Journal code: JCM. ISSN: 0893-9783.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English.

FS Priority Journals

EM 199115

AB By using a competitive solid phase immuno assay with **serotype** 1 specific and cross-reactive neutralizing monoclonal antibodies

heterotypic VP7 were observed only when the individuals possessed antibodies to a **serotype** of **rotavirus** in their acute-phase or prevaccination sera.

L11 ANSWER 19 OF 32 MEDLINE

AN 91190240 MEDLINE

DN 91190240

TI The VP8 fragment of VP4 is the rhesus **rotavirus** hemagglutinin.

AU Figue L; Greenberg H B; Mackow E R

CS Department of Medicine, Stanford University, California 94305.

NC 912-411362 (NIDDK)

IK88797

SO VIROLOGY, (1991 Apr) 181 (2) 553-58.

Journal code: NEA. ISSN: 0042-6822.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals; Cancer Journals

EM 199107

AB The amino-terminal trypsin cleavage fragment of VP4, called VP8, was expressed from a recombinant baculovirus in Sf-9 cells. The baculovirus-expressed VP8 protein is antigenically conserved as demonstrated by its recognition by a library of neutralizing **monoclonal** antibodies. In Sf-9 cell sonicates, the expressed VP8 protein is capable of agglutinating human type O erythrocytes, indicating that the functionally intact rhesus **rotavirus** viral hemagglutinin is contained in the 147-amino acid VP8 trypsin cleavage fragment. Amino acid similarities between VP8 and the amino-terminal 282 amino acids of the reovirus sigma 1 protein suggests that the sigma 1 hemagglutination function resides within these amino-terminal amino acids as well. When the expressed VP8 protein was used to immunize mice, a broadly cross-reactive neutralizing antibody response was obtained. Antibodies elicited to the expressed VP8 protein neutralized viruses of **serotypes** 1-4 and 6 but not porcine strains OSU (st5) or Gottfried (st4). The neutralizing antibody response to VP8 appeared to be more cross-reactive than the immune response to expressed VP4 or to whole RRV virion. This suggests that subunit protein immunizations may broaden the neutralizing antibody immune responses to rotaviruses and enhance protective immunity to serotypically distinct strains.

L11 ANSWER 20 OF 32 MEDLINE

AN 91180403 MEDLINE

DN 91180403

TI Electropherotypes, subgroups and **serotypes** of human **rotavirus** strains causing gastroenteritis in infants and young children in Palermo, Italy, from 1985 to 1989.

AU Arista S; Giovannelli L; Pistola D; Cascio A; Parea M; Gerna G

CS Institute of Microb. Imp. University of Palermo, Italy..

CS EPIDEMIOLOGY AND VIROLOGY, (1991 Jul-Aug) 101 (4) 429-436.

Journal code: RVE. ISSN: 0950-2688.

CY Italy

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 199107

AB During 1985-89, an epidemiological survey was conducted in Palermo, Sicily

(Southern Italy) on group A human **rotavirus** (HRV) strains which cause gastroenteritis in infants and young children. Two hundred and thirty-eight HRV strains were characterized for serogroup and

serotype

serotype

Journal; Article; (JOURNAL ARTICLE)
MULTI-ENTER ST

LA English.
FS Arranged Index Medical Journals; Priority Journals
EM 199011
AB The first longitudinal study of group A **rotavirus** **serotype** distribution in the USA is reported. ELISAs incorporating neutralizing **monoclonal** antibodies specific for the VP7 protein of **serotypes** 1, 2, 3, and 4 were used to determine the antigenic variation of group A rotaviruses in two collections of stool specimens. Stool samples were collected from children hospitalized during 1979-1980 at Texas Children's Hospital, Houston, and from children from a more rural

population hospitalized during 1981-1982 in the north-central USA. The predominant **serotype** varied from year to year in Houston, with **serotypes** 1, 3, and 4 each predominant in 1 or more years. In the north-central population only **serotype** 1 was predominant each year. Within a single **rotavirus** season in the Houston area, **serotypes** were not equally distributed by week of the season or county of residence. These differences in the distribution of **serotypes** have broad implications for the design and interpretation of **vaccine** programs.

L11 ANSWER 23 OF 32 MEDLINE

AN 90014784 MEDLINE

DN 90014784

TI Isolation in Europe of 69 M-like (**serotype** 3) human **rotavirus** strains with either subgroup I or II specificity and a long RNA electropherotype.

AU Gerna G; Sarasini A; Zentilin L; Di Matteo A; Miranda P; Parea M; Battaglia M; Milanesi G

CS Virus Laboratory, University of Pavia, Irees Policlinico S. Matteo, Italy..

SO ARCHIVES OF VIROLOGY, (1990) 112 (1-2) 27-40.

Journal code: 3L7. ISSN: 0304-8608.

CY Austria

DT Journal; Article; (JOURNAL ARTICLE)

LA English.

FS Priority Journals; Cancer Journals

EM 199010

AB During an epidemiological study on the prevalence of human **rotavirus** (HRV) **serotypes** 1-4 in Europe, we found that some strains could not be typed. However, when a **monoclonal** antibody directed to **serotype** 8 HRV was included in the typing assay, we detected seven 69 M-like (**serotype** 8) strains, six from Finland and one from Italy. The previously reported **serotype** 8 HRV strains, 69 M, B 37, and B 38 isolated in Indonesia, were of subgroup I specificity and presented a peculiar "super short" RNA electropherotype. In contrast, all the seven European strains possessed a long RNA pattern, and one of them had subgroup II specificity. Three of these strains were adapted to growth in cell cultures and were further characterized by neutralization and by Northern blot hybridization. They appeared to be closely related to **serotype** 8 HRV strain 69 M by neutralization, but showed partial homology with several human and animal strains by hybridization. The epidemiological importance of these **serotype** 8 strains circulating in Europe should be investigated, in view of their possible inclusion in a **rotavirus** **vaccine**.

L11 ANSWER 24 OF 32 MEDLINE

Halonen P
 Virus Laboratory, University of Pavia, Italy..
 SCANDINAVIAN JOURNAL OF INFECTIOUS DISEASES, (1987) 22 (1) 5-10.
 Journal code: VCM. ISSN: 0036-5548.
 CY Sweden
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 1987
 AB An extended epidemiological survey on the circulation of the 4
 established

human **rotavirus** (HRV) **serotypes** in some European
 countries was carried out in 831 fecal strains collected from infants and
 young children with acute non-bacterial gastroenteritis during 1981-88.
 Typing was done by enzyme-linked immunosorbent assay and/or solid-phase
 immune electron microscopy using VP7 type-specific neutralizing
monoclonal antibodies. **Serotype** 1 HRV strains were found
 to be largely predominant in this period both in Italy and other
 countries, whereas **serotype** 4 strains were less common. The
 number of strains of **serotypes** 1 and 4 circulating in Europe was
 equivalent only in 1983-84. **Serotype** 2 strains were
 significantly represented only in 1981-84, while strains of
serotype 3 were nearly absent, since only 8 strains (2 of which
 belonged to subgroup I) were found during the entire study period. About
 10% of strains could not be typed, while 9 strains exhibited dual VP7
 reactivity and 6 were non-group A HRVs. These epidemiological findings
 must be taken into consideration when deciding strategies for preparing
vaccines to be used in Europe.

L11 ANSWER 15 OF 12 MEDLINE

AN 90058833 MEDLINE

DN 90058833

TI **Rotavirus serotypes** causing acute diarrhoea in
 hospitalized children in Yogyakarta, Indonesia during 1978-1979.

AU Bishop R F; Unicomb L E; Spenarto Y; Suwardji H; Ristanto; Barnes G L

CS Department of Gastroenterology, Royal Children's Hospital, Melbourne,
 Victoria, Australia..

SO ARCHIVES OF VIROLOGY, (1989) 107 (3-4) 207-13.

Journal code: 8L7. ISSN: 0304-3698.

CY Austria

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals; Cancer Journals

EM 199001

AB **Rotavirus** strains in stool specimens from 111 children aged 3-24
 months admitted to hospital in Yogyakarta, Indonesia for treatment of
 acute diarrhoea were **serotyped** using VP7 **serotype**
 specific **monoclonal** antibodies in a double sandwich enzyme
 immunoassay. A **serotype** could be assigned to 19 of 111 specimens
 (17%). Inability to assign a **serotype** to 47% of specimens was
 probably due to loss of the outer capsid during transport of specimens
 from Indonesia to Australia. All four major human **rotavirus**
serotypes were detected during the 15 month survey from June 1978
 to August 1979, including one **serotype** 1, 5 **serotype**
 2, 31 **serotype** 3, and 21 **serotype** 4 strains. One
 additional strain reacted with **serotype** 3 and 4 Mabs.
Serotype 3 strains showed intratypic variation. The relative
 frequency of **serotypes** 2, 3, and 4 varied during the 15 months
 and appeared to be influenced by climatic changes associated with dry and
 wet seasons. **Vaccine** strategies must take account of

L11 ANSWER 26 OF 32 MEDLINE
 AN 89340742 MEDLINE
 DN 89340742
 TI Determination of **rotavirus serotype**-specific
 antibodies in sera by competitive enhanced enzyme immunoassay.
 AU Beards G M; Desselberger U
 CS Regional Virus Laboratory, East Birmingham Hospital, U.K.
 SO JOURNAL OF VIROLOGICAL METHODS, (1989 Apr-May) 24 (1-2) 103-10.
 Journal code: HQR. ISSN: 0166-0934.
 CY Netherlands
 IT Journal; Article; (JOURNAL ARTICLE)
 LA English.
 ES Priority Journals
 EM 198911
 AB A method is described for the specific detection of antibody to
 individual

rotavirus serotypes in sera. A competitive enzyme
 immunoassay (EIA) was developed in which **rotavirus**
serotype-specific **monoclonal** antibodies against VP7
 compete with antibodies in test sera for **rotavirus**
serotype-specific antigen bound to a solid phase. There was an
 excellent correlation between **serotype**-specific EIA results and
serotype-specific neutralization titres ($r = 0.915$, $P = \text{less than}$
 0.001). The value of this method for **rotavirus** epidemiology and
 vaccine trials is discussed.

L11 ANSWER 27 OF 32 MEDLINE
 AN 89210619 MEDLINE
 DN 89210619
 TI Identification of cross-reactive and **serotype** 2-specific
 neutralization epitopes on VP3 of human **rotavirus**.
 AU Taniguchi K; Maloy W L; Nishikawa K; Green K Y; Hoshino Y; Urasawa S;
 Kapikian A Z; Chanock R M; Gerziglia M
 CS Laboratory of Infectious Diseases, National Institute of Allergy and
 Infectious Diseases, Bethesda, Maryland 20892.
 SO JOURNAL OF VIROLOGY, (1989 Jul) 62 (7) 1421-6.
 Journal code: FCV. ISSN: 0022-538X.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English.
 ES Priority Journals; Cancer Journals
 OS GENBANK-M21914
 EM 198909
 AB The group A rotaviruses are composed of at least seven **serotypes**
 . **Serotype** specificity is defined mainly by an outer capsid
 protein, VP7. In contrast, the other surface protein, VP3 (775 amino
 acids), appears to be associated with both **serotype**-specific and
 heterotypic immunity. To identify the cross-reactive and **serotype**
 -specific neutralization epitopes on VP3 of human **rotavirus**, we
 sequenced the VP3 gene of antigenic mutants resistant to each of seven
 anti-VP3 neutralizing **monoclonal** antibodies (EMMA's) which
 exhibited heterotypic or **serotype** 2-specific reactivity, and we
 defined three distinct neutralization epitopes on VP3. The mutants
 sustained single amino acid substitutions at position 305, 392, 433, or
 439. Amino acid position 305 was critical to epitope I, whereas amino
 acid
 position 433 was critical to epitope III. In contrast, epitope II
 appeared
 to be more dependent upon conformation and protein folding because both
 amino acid positions 305 and 439 appeared to be critical. These four

serotypes

suggests a mechanism of heterotypic immunity.

L11 ANSWER 30 OF 32 MEDLINE

AN 87195841 MEDLINE

DN 87195841

TI Simple and specific enzyme immunoassay using **monoclonal** antibodies for serotyping human rotaviruses.

AU Coulson B S; Unicomb L E; Pitsen G A; Bishop R F

SO JOURNAL OF CLINICAL MICROBIOLOGY, (1987 Mar) 25 (3) 509-15.

Journal code: HSH. ISSN: 0095-1137.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 198719

AB An enzyme immunoassay for serotyping human rotaviruses in stools and in cell culture was developed. Hyperimmune rabbit antisera to rotaviruses were used as capture antibodies, and **rotavirus**-neutralizing mouse **monoclonal** antibodies specific for **serotypes** 1, 2, 3, and 4 were used as detection reagents. Partial purification of **monoclonal** antibodies and inclusion of skim milk powder in antibody diluents contributed to assay specificity. The sensitivity of this assay was greater than that of a direct enzyme immunoassay in which rotaviruses of the appropriate **serotype** were adsorbed directly to the solid phase. When fecal extracts were concentrated threefold, this serotyping enzyme immunoassay was of equal specificity and approached the sensitivity of electron microscopy for **rotavirus** detection. This assay is simple and rapid and is suitable for serotyping the large

numbers

of isolates obtained from epidemiological studies and **vaccine** trials.

L11 ANSWER 11 OF 31 MEDLINE

AN 86211423 MEDLINE

DN 86211423

TI Passive protection against **rotavirus**-induced diarrhea by **monoclonal** antibodies to surface proteins vp3 and vp7.

AU Offit P A; Shaw R D; Greenberg H E

NO 1 R23 AI-21065-01 (NIAID)

R22 AI-21362-01 (NIAID)

SO JOURNAL OF VIROLOGY, (1986 May) 58 (2) 780-3.

Journal code: KCV. ISSN: 0022-538X.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals; Cancer Journals

EM 198608

AB **Monoclonal** antibodies directed against two **rotavirus** surface proteins (vp3 and vp7) as well as a **rotavirus** inner capsid protein (vp2) were tested for their ability to protect suckling mice against virulent **rotavirus** challenge. **Monoclonal** antibodies to two distinct epitopes of vp2 of simian **rotavirus** strain RRV neutralized RRV in vitro and passively protected suckling mice against RRV challenge. A **monoclonal** antibody directed against vp3 of porcine **rotavirus** strain OSU neutralized three distinct **serotypes** in vitro (OSU, RRV, and HK) and passively protected suckling mice against OSU, RRV, and UK virus-induced diarrhea. The role

of

vp3 in eliciting protection against heterotypic **rotavirus** challenge should be considered when developing a **vaccine** with

L11 ANSWER 32 OF 32 MEDLINE
 AN 8135043 MEDLINE
 IN 8135043
 TI Reassortant rotaviruses as potential live **rotavirus**
vaccine candidates.
 AU Midthun K; Greenberg H B; Hashino Y; Kapikian A Z; Wyatt R G; Chanock R M
 SO JOURNAL OF VIROLOGY, (1985 Mar) 53 (3) 949-54.
 Journal code: KCV. ISSN: 0022-538X.
 CY United States
 IT Journal; Article; (JOURNAL ARTICLE)
 LA English.
 FS Priority Journals; Cancer Journals
 EM 198506
 AB A series of reassortants was isolated from coinfection of cell cultures with a wild-type animal **rotavirus** and a "noncultivable" human **rotavirus**. Wild-type bovine **rotavirus** (UK strain) was reassorted with human **rotavirus** strains D, DS-1, and P; wild-type rhesus **rotavirus** was reassorted with human **rotavirus** strains D and DS-1. The D, DS-1, and P strains represent human **rotavirus** serotypes 1, 2, and 3, respectively. Monospecific antiserum (to bovine **rotavirus**, NCDV strain) or a set of **monoclonal** antibodies to the major outer capsid neutralization glycoprotein, VP7 (of the rhesus **rotavirus**), was used to select for reassortants with human **rotavirus** neutralization specificity. This selection technique yielded many reassortants which received only the gene segment coding for the major neutralization protein from the human **rotavirus** parent, whereas the remaining genes were derived from the animal **rotavirus** parent. Single human **rotavirus** gene substitution reassortants of this sort represent potential live **vaccine** strains.

=> s polio

L12 2116 POLIO

=> s 112 and 13 and 14 and 15 and 16

L13 0 L12 AND L3 AND L4 AND L5 AND L6

=> s 112 and 13

L14 31 L12 AND L3

=> s 114 and 14

L15 1 L14 AND L4

1 115 114 14

L16 ANSWER 1 OF 1 MEDLINE
 AN 81222491 MEDLINE
 IN 81222491
 TI Continuous cell substrate considerations.
 AU Lubinski A S
 SO SmithKline Beecham Pharmaceuticals, King of Prussia, Pennsylvania..
 J BIODRUGS TECHNOLOGY, 1985, 10: 498-501. Ref: 10
 Journal code: ALL. ISSN: 0893-2971.
 CY United States

AB The debate over the potential risk of tumorigenicity attributable to the use of GCL substrates for biologicals production has continued for over

years, and may continue for some time to come. Manufacturers and regulators

It is currently possible to follow these guidelines to prepare a submission.

biologicals and monoclonal antibodies in CCLs which do not pose unreasonable risks. This chapter has attempted to describe the scientific tools available to evaluate the putative risk of tumorigenicity due to potential virus DNA and protein contaminants. No theoretical or experimental basis exists to hypothesize that residual cellular protein might present a significant risk of tumorigenicity. The tools are certainly adequate for characterization of putative risks due to viruses and DNA but are not sufficiently powerful by themselves to assure product safety. The subsequent chapter on process validation describes how adequate assurances of safety ultimately can be obtained for products of CCLs against theoretical risks of tumorigenicity due to putative viruses and DNA. In addition to these safeguards, no evidence of tumorigenicity has been found in human or livestock animal recipients of the products prepared in CCL substrates. Many patients have received inoculations of tissue plasminogen activator, erythropoietin, factor VIII, soluble CD4, GM-CSF, hepatitis B surface antigen vaccine, and various monoclonal antibodies and other recombinant products of continuous cell lines in clinical trials. For tissue plasminogen activator, large doses of 100 mg per patient or more have been used. At the time of

over 11 kg of CHO-derived tissue plasminogen activator has been sold

late 1987 for administration to over 100,000 human patients. For recombinant factor VIII, erythropoietin, and soluble CD4 proteins,

administration has been employed. Millions have received polio and rabies vaccines prepared in continuous Vero cells. In addition to this human experience, livestock animals have received annual inoculations of foot-and-mouth virus vaccine prepared in BHK-21 (a highly tumorigenic CCL) for up to 14 years without effect (69). No effects have been reported which might be attributed to oncogenic factors. Thus, scientific tools of characterization and principles of process validation are available to protect patients from putative risks of tumorigenicity associated with products prepared in CCLs. Increasing clinical experience also supports this conclusion.

Table 1. *Continued*

DATE: 11-1-82 MEDLINE

1. *Journal of the American Medical Association*, 1997; 277: 1001-1005.

17. A microtitre plate method for isolation and typing of poliovirus using a plaque assay (EUSA).

AU Samuel B; Medson B; Strand M; Appleton H

127 Enteric, Respiratory and Neurological Virus Laboratory, Central Public Health Laboratory, 61 Colindale Avenue, NW9 5HT, London, UK.

is: [is: aphis.nhls.uk](mailto:aphis.nhls.uk)

Figure 1. The effect of the number of iterations on the accuracy of the proposed algorithm. The number of iterations is 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000, 1100, 1200, 1300, 1400, 1500, 1600, 1700, 1800, 1900, 2000, 2100, 2200, 2300, 2400, 2500, 2600, 2700, 2800, 2900, 3000, 3100, 3200, 3300, 3400, 3500, 3600, 3700, 3800, 3900, 4000, 4100, 4200, 4300, 4400, 4500, 4600, 4700, 4800, 4900, 5000, 5100, 5200, 5300, 5400, 5500, 5600, 5700, 5800, 5900, 6000, 6100, 6200, 6300, 6400, 6500, 6600, 6700, 6800, 6900, 7000, 7100, 7200, 7300, 7400, 7500, 7600, 7700, 7800, 7900, 8000, 8100, 8200, 8300, 8400, 8500, 8600, 8700, 8800, 8900, 9000, 9100, 9200, 9300, 9400, 9500, 9600, 9700, 9800, 9900, 10000. The accuracy is 0.0, 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 1.0.

EM 210912

AB A simple, sensitive, specific and rapid procedure for isolating and typing

polioviruses is described. Specimens are inoculated onto confluent monolayers of cell lines (Hep-2C, L20B or RD) seeded into microtitre plates. After 14-48 h, the infected cells are stained with **monoclonal** antibodies specific for poliovirus types 1,2,3 or a blend of the three antibodies followed by an anti-mouse IgG-horseradish peroxidase conjugate. On addition of substrate, infected cells stain an intense blue colour and are easily distinguished from uninfected cells by light microscopy. Poliovirus infection can be detected before the appearance of cytopathic effects (CPE). This Blue-Cell ELISA test was evaluated against conventional culture and seroneutralisation on a range of **polio** isolates and clinical specimens. The sensitivity and specificity of the Blue-cell ELISA compared to neutralisation was 100% (47/47) on culture supernatants of poliovirus isolates sent to our reference laboratory for confirmation. All the poliovirus isolates were typed within 24 h of specimen inoculation using the new method compared

to

6-10 days by conventional culture and neutralisation. The method proved

to

be more sensitive than conventional culture when clinical specimens were examined. Of 43 clinical specimens from which poliovirus had been previously isolated by various laboratories in the U.K., 30/43 (69.8%) were positive for poliovirus by the Blue-Cell ELISA compared to 19/43 (47.4%) by conventional culture and neutralisation. Neutralisation of specimens exhibiting CPE indicated that all of the polioviruses were correctly typed with the new method. CPE was not observed by conventional culture in any specimen that was negative in the Blue-Cell ELISA. There were no cross-reactions with a range of other enteroviruses.

L14 ANSWER 2 OF 31 MEDLINE

AN 2101114575 MEDLINE

DN 21472710

TI Molecular and antigenic characterization of a highly evolved derivative of

the type 1 oral poliovaccine strain isolated from sewage in Israel.

AB Shulman L M; Manor Y; Handsker R; Delpeyroux F; McDonough M J; Halmut T; Silberstein I; Alfamaari J; Quay J; Fisher T; Robinson J; Kew O M; Crainic R; Mendelson E

CS Central Virology Laboratory, Public Health Laboratories, Chaim Sheba Medical Center, Tel-Hashomer 52621, Israel.. svlsheba@netvision.net.il

SO JOURNAL OF CLINICAL MICROBIOLOGY, (2003 Oct) 33 (10) 3329-34.
Journal code: HSH. ISSN: 0095-1137.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FT Primary Journals

EM 210912

AB A highly evolved derivative of the type 1 oral poliovaccine (OPV) strain was recovered from environmental samples during a study concerning wild polioviruses. Virus was cultivated in L20B cells and then passaged on BSM cells at 40 degrees C (permissive capacity at supraoptimal temperature)-positive markers to select against host OIV strains. All but 1 of 25 RST-positive OPV-derived environmental isolates were antigenically and genetically (99.5% VP1 sequence match) similar to the respective Sabin strains. However, isolate

PM 210912

Abstracted in: J Clin Microbiol. Compared neutralization with Sabin vaccine.

51 Israeli children 15 years old were significantly lower to 4568-1 geometric mean titer (GMT), 47) than to Sabin 2 (GMT, 162) or to the prototype wild strain, PV2/MEF-1/EGY42 (GMT, 108). Two key attenuating sites had also reverted in 4568-1 (A(481) to G in the 5' untranslated region and the VP1 amino acid I(143) to T), and the isolate was highly neurovirulent for transgenic mice expressing the poliovirus receptor (HVR-Tp21 mice). The extensive genetic divergence of 4568-1 from the parental Sabin 2 strain suggested that the virus had replicated in one or more people for approximately 6 years. The presence in the environment of a highly evolved, neurovirulent OPV-derived poliovirus in the absence of **polio** cases has important implications for strategies for the cessation of immunization with OPV following global **polio** eradication.

LI4 ANSWER 3 OF 31 MEDLINE
 AN 20010506 MEDLINE
 IN 20010506
 TI Detection of mutants in **polio** vaccine viruses using pooled antipoliavirus **monoclonal** antibodies.
 AU Horie H; Sato-Miyazawa M; Ota Y; Wakabayashi K; Doi T; Yoshizawa K; Doi Y;
 Hashizume S
 CS Japan Polio Myelitis Research Institute, Kamegawa-cho, Tokyo, 180-0003, Japan.
 SO BIOLOGICALS, (1999 Sep) 27 (3) 217-24.
 Journal code: AMW. ISSN: 1045-1056.
 CY ENGLAND: United Kingdom
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 200105
 EW 20010503
 AB We prepared six **monoclonal** antibodies (mAbs) for type 1 polioviruses, and analysed their neutralizing specificities for use in safety tests in oral poliomyelitis vaccine (OPV) production. Pools of two or more individual mAbs showed high neutralizing activity against high-titre (approximately 10(7) CCID (50)/25 microl) of Sabin type 1 virus. It was demonstrated that the pooled mAbs can be utilized effectively in detection tests of adventitious viruses, which are among the safety tests in OPV production. Moreover, some pooled mAbs were shown to be capable of detecting very small amounts of type 1 virulent viruses and mutants in high-titre Sabin type 1 virus suspensions. Neutralizing antibody titres of these pooled mAbs decreased with increasing numbers of mutants containing neurovirulent activity in high-titre Sabin type 1 viruses which were repeatedly passaged in culture. It is expected that these pooled mAbs will contribute greatly to safety tests for OPV production. Copyright 1999 The International Association for Biologicals.

LI4 ANSWER 4 OF 41 MEDLINE
 AN 20010501 MEDLINE
 IN 20010501
 TI Cell substrates: lessons learned and challenges remaining.
 AU International C.C.
 SO DEVELOPMENTS IN BIOLOGICAL STANDARDIZATION, (1999) 100 57-63. Ref: 14
 Journal code: E7V. ISSN: 0301-5149.
 CY Switzerland
 DT Historical
 Journal; Article; JOURNAL ARTICLE
 General Review; REVIEW
 General Review

is directly related to a series of technical advances and challenges to the status quo, some of which were accepted quickly while others took more than a decade to resolve. The development of cell culture techniques in the 1950s opened the door to the manufacture of a wide range of biological products. The first major challenge occurred in the late 1960s when human diploid cells (HDCs) were developed and proposed as an alternative to primary cell cultures for the production of live viral vaccines such as polio, which up to that point had been produced in primary cells of various species. In the 1970s, attention was focussed on the use of continuous cell lines (CCLs) for the production of non-replicating biological products such as interferon (IFN). The next significant technical advance and challenge was the development of recombinant DNA and monoclonal antibody technologies in the 1980s, both of which required the use of CCLs. Although most of the issues relating to CCLs in the manufacture of biological products have been resolved, issues related to their use as substrates for live viral vaccines remain to be fully addressed. Those experiences in the past teach us clearly that a system in which regulatory authorities, industry, and the general biomedical community cooperate in finding solutions to problems and in reaching consensus on issues raised by technical advances is ultimately in everyone's best interest. The World Health Organization has played a major role in that regard, and it should continue to provide leadership in this area.

L14 ANSWER 3 OF 31 MEDLINE
 AN 1999226941 MEDLINE
 DN 99226941
 TI A Sabin vaccine-derived field isolate of poliovirus type 1 displaying aberrant phenotypic and genetic features, including a deletion in antigenic site 1.
 AU Mulders M N; Reimerink J H; Stervik M; Ala-oddinoglu I; van der Avoort H G; Hovi T; Koopmans M P
 CS Enterovirus Laboratory, Department of Virology, National Public Health Institute (KTL), Helsinki, Finland.. Mick.Mulders@ktl.fi
 SO JOURNAL OF GENERAL VIROLOGY, (1999 Apr) 80 (Pt 4) 907-16.
 Journal code: I9E. ISSN: 0022-1317.
 CY ENGLAND: United Kingdom
 ET Journal: Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals; Cancer Journals
 OS GENBANK-AF065158
 EM 199907
 FW 199907
 AB Poliovirus strains isolated from the oral poliovirus vaccine (Sabin) and differentiated from wild-type poliovirus by tests based on either immunological or genetic properties of the strains. The characterization of a recently identified poliovirus type 1 isolate with exceptional properties is described. Initial phenotypic analysis of the virus by use of polyclonal absorbed antisera suggested a wild-type character. However, the different genomic analyses all confirmed the Sabin-derived character of the virus. All 17 plaques isolated from the strain shared these properties, thus excluding the possibility of a mixture of a wild-type

more than 99.4% mutations were observed in regions encoding three major antigenic sites. The deduced amino acid substitutions confirmed the aberrant results of micro-neutralization assays with site-specific **monoclonal** antibodies. The most striking feature was the existence of a hexanucleotide deletion in the VP1 gene, which gave rise to a two amino acid deletion in the BC loop. In spite of these antigenic changes, the strain was readily serotyped as poliovirus type 1 under standard conditions. Likewise, replication of the virus under cell culture conditions was not affected by these mutations or by the deletion. Standard **polio** vaccination protects against this aberrant virus, and its epidemiological significance remains open.

L14 ANSWER 6 OF 31 MEDLINE
 AN 1999017824 MEDLINE
 DN 99017824
 TI Wild poliovirus circulation among healthy children immunized with oral **polio** vaccine in Antananarivo, Madagascar.
 AU Andrianarivelo M R; Rabarimanana L; Boisier P; Chezzi C; Zeller H G
 CS Virology Unit, Institut Pasteur, Antananarivo, Madagascar..
 malaspasteur.mg
 SO TROPICAL MEDICINE AND INTERNATIONAL HEALTH, (1999 Jan) 4 (1) 50-7.
 Journal code: CFS. ISSN: 1360-2276.
 CY ENGLAND: United Kingdom
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 199907
 EW 19990701
 AB From July 1995 to December 1996, 3185 stool specimens from healthy children aged 6-59 months attending 6 dispensaries in the Antananarivo area were examined for poliovirus. The children had been routinely immunized according to the Expanded Programme on Immunization (EPI) schedule and received the last dose of oral **polio** vaccine (OPV) more than 1 month before stool collection. 99.4% of the children were immunized with at least 3 doses of OPV. HEp-2 cell culture revealed virus infections in 192 stools (6.0%), including 9 poliovirus (0.3%) and 183 nonpolio enterovirus isolates (5.7%). Infections occurred throughout the year, but incidence was higher during the hot and rainy season (P=0.01). Using a neutralization test with **monoclonal** antibodies and PCR-RFLP in two genomic regions coding for the VP1 capsid and RNA polymerase, 4 wild polioviruses (3 type 1 and 1 type 3) and 5 vaccine-related polioviruses (2 Sabin 1-like variants, 1 Sabin 2-like and 2 Sabin 3-like) strains were identified. The wild polioviruses were isolated at the beginning and the end of the dry season. Similar RFLP patterns were observed for the 3 wild type 1 polioviruses. Comparison of partial genomic sequences in the VP1/2 A region of 1 of the wild type 1 isolates with 2 wild type strains isolated in Antananarivo in 1992 and 1994 showed a divergence of at least 1% between the strains, suggesting at least two different pathways of transmission during this period. Our findings demonstrate that immunisation with 3 doses of OPV did not prevent intestinal carriage of wild poliovirus strains, and that there is a risk of wild poliovirus transmission to susceptible children in the area. Multiple strategies are required to improve immunization coverage in Madagascar.

L14 ANSWER 7 OF 31 MEDLINE
 AN 1999017825 MEDLINE
 DN 99017825


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CS Laboratory of Virology, Istituto Superiore di Sanita, Rome, Italy..
SI ficie@viru.srl.it.iss.it
SI JOURNAL OF CLINICAL MICROBIOLOGY, (1998 Jul) 36 (7) 1912-7.
SI Journal code: HSH. ISSN: 0095-1137.
SI United States
SI Journal: Article; (JOURNAL ARTICLE)
SI English
SI Priority Journals
SI GENBANK-AJ007960; GENBANK-AJ007963; GENBANK-AJ007961; GENBANK-AJ007962;
SI GENBANK-AJ007969; GENBANK-AJ007964; GENBANK-AJ007965; GENBANK-AJ007966;
SI GENBANK-AJ007967; GENBANK-AJ007968; GENBANK-AJ007969
SI 199812
SI Mass vaccination has led poliomyelitis to become a rare disease in a
SI large
SI part of the world, including Western Europe. However, in the past 20
SI years
SI wild polioviruses imported from countries where polio is endemic
SI have been responsible for outbreaks in otherwise polio-free
SI European countries. We report on the characterization of poliovirus
SI isolates from a large outbreak of poliomyelitis that occurred in Albania
SI in 1996 and that also spread to the neighboring countries of Yugoslavia
SI and Greece. The epidemics involved 145 subjects, mostly young adults, and
SI caused persisting paralysis in 87 individuals and 16 deaths. The agent
SI responsible for the outbreak was isolated from 74 patients and was
SI identified as wild type 1 poliovirus by both immunological and molecular
SI methods. Sequence analysis of the genome demonstrated the involvement of
SI a
SI single virus strain throughout the epidemics, and genotyping analysis
SI showed 95% homology of the strain with a wild type 1 poliovirus strain
SI isolated in Pakistan in 1995. Neutralization assays with both human sera
SI and monoclonal antibodies were performed to analyze the
SI antigenic structure of the epidemic strain, suggesting its peculiar
SI antigenic characteristics. The presented data underline the current risks
SI of outbreaks due to imported wild poliovirus and emphasize the need to
SI improve vaccination efforts and also the need to implement surveillance
SI in
SI countries free of indigenous wild poliovirus.
SI
SI L14 ANSWER 3 OF 31 MEDLINE
SI AN 96012513 MEDLINE
SI DN 96012513
SI TI Immunogenicity of trypsin treated type 2 and type 3 poliovirus in rats.
SI AU Keister S B; Lantinga M; Hazendonk T; Seavery E C
SI CS Department for Process and Product Development, National Institute of
SI Public Health and Environmental Protection, Bilthoven, The Netherlands..
SI SC BIOLOGICALS, (1995 Jun) 23 (2) 179-83.
SI Journal code: AMV. ISSN: 1045-1356.
SI Country: United Kingdom
SI Journal: Article; (JOURNAL ARTICLE)
SI English
SI Priority Journals
SI 199511
SI Ab Oral polio vaccine will encounter the proteolytic enzyme trypsin
SI during administration but inactivated polio vaccine not. To
SI investigate the effect on the humoral immune response, rats were
SI immunized
SI intramuscularly with trypsin treated type 2 and type 3 polioviruses. In
SI the
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had wild-type antigenic phenotypes and, as shown by partial genomic sequencing, wild-type genotypes. Correlation of laboratory and epidemiological data suggested that residual cases of paralytic poliomyelitis in Poland between 1981 and 1990 were vaccine-related. Study of the non-paralytic cases, however, helped identify the circulation of endemic wild-type viruses in a well-vaccinated community.

L14 ANSWER 13 OF 31 MEDLINE

AN 92191301 MEDLINE

DN 92191301

TI The application of immunofluorescence and neutralization McAb tests to typing diagnosis of 286 **polio** strains.

AU Tang E

CS Institute of Medical Biology, Nanjing..

SO CHUNG-KUO I HSUEH KO HSUEH YUAN HSUEH PAO ACTA ACADEMIAE MEDICINAE

SINICAE, (1991 Oct) 13 (5) 365-71.

Journal code: C23. ISSN: 1040-603X.

CY China

DT Journal; Article; (JOURNAL ARTICLE)

LA Chinese

EM 199206

AB The serum neutralization test is a classical method used for typing poliovirus. Since 1987, some type-specific non-neutralization McAb's have been obtained in our laboratory, and were used in indirect immunofluorescence staining tests to detect serotypes I, II and III. A total of 286 poliovirus strains were typed by the indirect immunofluorescence test (IF) and neutralization test (NT). The results demonstrated that both tests were in agreement, suggesting that McAb IF could replace NT as an alternative typing diagnostic method: moreover, IF was easier to perform than NT. It is economical and rapid (the results

can be read within 1-2 days as compared to 7 days for NT). The reagent is

very stable and can be stored for two years at 4 degrees C or for two months

at 37 degrees C.

L14 ANSWER 14 OF 31 MEDLINE

AN 92101619 MEDLINE

DN 92101619

TI Development of allogenic hybridomas for production of **monoclonal** antibodies against oral **polio** vaccine strains [letter].

AU Gupta C K; Sokhey J; Gupta R K; Singh H

SO VACCINE, (1991 Nov) 9 (11) 853-4.

Journal code: X69. ISSN: 0264-410X.

CY ENGLAND: United Kingdom

DT Letter

LA English

EM Primary Journals

EM 199111

L14 ANSWER 15 OF 31 MEDLINE

AN 9100491 MEDLINE

DN 9100491

TI Continuous cell substrate considerations.

AU Lukatski A S

CS SmithKline Beecham Pharmaceuticals, King of Prussia, Pennsylvania..

SO BIOPHARMACEUTICALS, (1991) 10 445-513. Ref: 23

Journal code: ALI. ISSN: 0888-7470.

EM 199111

EM 199114

AB The debate over the potential risk of tumorigenicity attributable to the use of CCL substrates for biologicals production has continued for over

20

years and may continue for some time to come. Manufacturers and regulatory

agencies are developing scientifically based guidelines for such products.

It is currently possible to follow these guidelines to prepare recombinant

biologicals and **monoclonal** antibodies in CCLs which do not pose unreasonable risks. This chapter has attempted to describe the scientific tools available to evaluate the putative risk of tumorigenicity due to potential virus DNA and protein contaminants. No theoretical or experimental basis exists to hypothesize that residual cellular protein might present a significant risk of tumorigenicity. The tools are certainly adequate for characterization of putative risks due to viruses and INA but are not sufficiently powerful by themselves to assure product safety. The subsequent chapter on process validation describes how adequate assurances of safety ultimately can be obtained for products of CCLs against theoretical risks of tumorigenicity due to putative viruses and INA. In addition to these safeguards, no evidence of tumorigenicity has been found in human or livestock animal recipients of the products prepared in CCL substrates. Many patients have received inoculations of tissue plasminogen activator, erythropoietin, factor VIII, soluble CD4, GM-CSF, hepatitis B surface antigen vaccine, and various **monoclonal** antibodies and other recombinant products of continuous cell lines in clinical trials. For tissue plasminogen activator, large doses of 100 mg per patient or more have been used. At the time of

writing

over 10 kg of CHO-derived tissue plasminogen activator has been sold since

late 1987 for administration to over 100,000 human patients. For recombinant factor VIII, erythropoietin, and soluble CD4 proteins,

chronic

administration has been employed. Millions have received **polio** and rabies vaccines prepared in continuous Vero cells. In addition to

this

human experience, livestock animals have received annual inoculations of foot-and-mouth virus vaccine prepared in BHK-21 (a highly tumorigenic

CCL)

for up to 14 years without effect (49). No effects have been reported which might be attributed to oncogenic factors. Thus, scientific tools of characterization and principles of process validation are available to protect patients from putative risks of tumorigenicity associated with products prepared in CCLs. Increasing clinical experience also supports this conclusion.

114 MICHAEL J. DE VRIES, M.D.

AB MICHAEL J. DE VRIES, M.D.

115 MICHAEL J. DE VRIES, M.D.

116 MICHAEL J. DE VRIES, M.D. The TriT lipoprotein as a vehicle for the transport of foreign antigenic determinants to the cell surface of Escherichia coli: triT-triE-function relationships in the TriT protein.

AU Taylor I M; Harrison J L; Timmis K N; O'Connor C D

117 Department of Biochemistry, University of Southampton, UK.

118 MOLECULAR MICROBIOLOGY, 1990 Aug; 4 (8): 1259-68.

119 Journal code: MOM. ISSN: 0950-2688.

120 PUBLISHED: United Kingdom

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The structure and function of the TraT protein determined by plasmid R6-F was probed by genetic insertion of a foreign antigenic determinant, the epitope of polio virus, at residues 61, 125, 180, 200 or 216 of the protein. The chimeric proteins were transported to the outer membrane and, in three cases, immunoassays with an anti-C3 monoclonal antibody indicated that the C3 epitope was exposed on the cell surface. Three of the hybrids, with insertions at residues 125, 180 and 200, assembled into the trypsin-resistant oligomeric form characteristic of the wild-type protein, which suggested that these regions are not involved in TraT subunit:subunit interactions. Additionally, the hybrid protein carrying the C3 epitope at position 180 functioned in a genetic suppression assay and retained partial surface-exclusion activity. Thus, its localization, folding and organization does not appear to be grossly altered from that of the wild-type protein. Applications of the protein for the transport of foreign antigenic determinants to the cell surface are discussed.

L14 ANSWER 17 OF 31 MEDLINE

AN 9038514 MEDLINE

DN 9038514

TI Creation of targets for proteolytic cleavage in the LamB protein of E coli

K12 by genetic insertion of foreign sequences: implications for topological studies.

AU Ronco G; Charbit A; Hofnung M

CS Unite de Programmation Moleculaire et Toxicologie Genetique, CNRS UA271 INSERM U163, Institut Pasteur, Paris, France..

SO BIOCHIMIE, (1990 Feb-Mar) 72 (2-3) 183-9.

Journal code: A14. ISSN: 0300-9084.

CY France

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 199011

AB LamB, an integral outer membrane protein of E coli K12, is highly resistant to protease digestion. We had previously genetically inserted a foreign sequence corresponding to an epitope from the poliovirus next to amino acids 146, 153, 185, and 374 of LamB. In 3 cases (sites 146, 153, 374), insertion of the foreign peptide did not extensively affect the functions of LamB (and therefore folding). In 2 cases (sites 146 and 374) the polio virus epitope was detectable on the bacterial surface with a specific monoclonal antibody. We show here that the 4 modified proteins are sensitive to trypsin, including in intact cells.

The size of the major cleavage products is that expected for proteolysis at sites in the sequence inserted. In 1 case (site 185), this was directly demonstrated by protein sequencing. The results confirm the cell surface exposure of the region of residues 153 and 374 and provide information on the regions around residues 146 and 185, respectively and limitations of this approach for fine studies on the mode of insertion of membrane proteins are briefly discussed.

L14 ANSWER 18 OF 31 MEDLINE

AN 9038514 MEDLINE

DN 9038514

Journal code: JP ISSN: 0022-3050.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199101

AB In patients with prior **polio** there was an excessive use of remaining motor units and an absence of type II muscle fibres in the tibialis anterior (TA). In the present study, eight subjects with prior **polio** with more than 40% type I fibres in the TA were examined. The aim was to elucidate whether the lack of type II muscle fibres was

due to a selective loss of motoneurons with high threshold and high axonal conduction velocity or due to a muscle fibre transition from type II to type I. There was no decrease of the proportion of motoneurons with high threshold and high axonal conduction velocity. **Monoclonal** antibodies against fast and slow myosin heavy chains (MHC) were used as histochemical markers and many muscle fibres of type I according to

ATPase stainability showed a binding of both anti-fast and anti-slow MHC. It is suggested that the type I muscle fibre dominance in prior **polio** subjects with excessive use of TA during walking is due to a muscle fibre transition from type II to type I and not to a loss of one class of motor units.

L14 ANSWER 15 OF 31 MEDLINE

AN 89111579 MEDLINE

DN 89111579

TI The concept and operational definition of protein epitopes.

AU Van Regenmortel M H

CS Institut de Biologie Moléculaire et Cellulaire, Strasbourg, France.

SO PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY OF LONDON. SERIES B:

BIOLOGICAL SCIENCES, (1989 Jun 12) 323 (1217) 491-66. Ref: 98

Journal code: PSE. ISSN: 0962-8436.

CY ENGLAND: United Kingdom

DT Journal; Article; (JOURNAL ARTICLE)

General Review; (REVIEW)

(REVIEW, ACADEMIC)

LA English

FS Priority Journals

EM 198911

AB The antigenic determinants or epitopes of a protein correspond to those parts of the molecule that are specifically recognized by the binding sites or paratopes of certain immunoglobulin molecules. Epitopes are thus relational entities that require complementary paratopes for their operational recognition. Some authors consider that the concept of epitope

necessarily involves the two properties of antigenic reactivity (ability to bind to a paratope) and immunogenicity (ability to induce an immune response). Such a view creates difficulties because it makes the existence

of epitopes in a protein depend on immunogenetic and regulatory mechanisms

of the immunised host. The delineation of epitopes can be achieved by antigenic cross-reactivity studies or by X-ray crystallography. Both approaches require specific criteria for deciding which residues of the antigen are in contact with the paratope and are functionally part of the epitope. The relative contribution of static accessibility, segmental mobility and induced fit to immune recognition remains controversial.

different **monoclonal** antibodies that can be raised against it, the delineation of epitopes corresponds to the situation in various hosts of the immune repertoire specific for the antigen. Neutralization epitopes

are a special subclass of the epitopes of infectious agents and toxins that are specifically recognized by antibody molecules able to neutralize the biological activity of the antigen. The identification of neutralization epitopes is important for the development of synthetic vaccines because it is this type of epitope that should be mimicked by synthesis and used as a vaccine for eliciting protective immunity. The first demonstration that synthetic peptides could elicit antibodies that neutralized viral infectivity was made by Anderer and his colleagues in the 1960s in their work with tobacco mosaic virus. Nearly 20 years passed before it was shown that antibodies to synthetic peptides were also able to neutralize the infectivity of other viruses such as foot-and-mouth disease, **polio** and hepatitis B viruses.

LI4 ANSWER 20 OF 31 MEDLINE

AN #P062042 MEDLINE

DN #P062042

TI An engineered poliovirus chimaera elicits broadly reactive HIV-1 neutralizing antibodies.

AU Evans R J; McKeating J; Meredith J M; Burke K L; Katrak K; John A; Ferguson M; Minor P D; Weiss R A; Almond J W

CS Department of Microbiology, University of Reading, UK.

SO NATURE, (1989 Jun 1) 339 (6223) 385-8, 140.

Journal code: N33. ISSN: 0028-0836.

CY ENGLAND: United Kingdom

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals; Cancer Journals

EM 198909

AB The Sabin type 1 vaccine strain of poliovirus is probably the safest and most successful live-attenuated vaccine virus used in humans. Its widespread use since the early 1960s has contributed significantly to the virtual eradication of poliomyelitis in developed countries. We have reported previously the construction of an intertypic antigen chimaera of poliovirus, based on the Sabin 1 strain, and proposed that this virus could be modified to express on its surface antigenic determinants from other pathogens. We describe here the construction and characterization of

a poliovirus antigen chimaera containing an epitope from the transmembrane

glycoprotein (gp41) of human immunodeficiency virus type 1 (HIV-1). In antibody adsorption experiments, the virus chimaera inhibited neutralization of HIV-1 by anti-peptide **monoclonal** antibodies specific for the gp41 epitope and significantly reduced the group

specific

neutralizing activity of HIV-1 positive human sera. Rabbit antisera

raised

by a chimaeric version of the **polio**/HIV chimaera in adjuvant was shown to be specific for HIV-1 gp41 in peptide-binding assays and by Western blotting. Moreover, the antisera neutralized a wide range of American and African HIV-1 isolates and also inhibited virus-induced cell fusion. **Monoclonal** antibodies against the HIV-1 derived regions of the chimaera also neutralized HIV-1. These results establish the potential of using poliovirus for the presentation of foreign antigens

and

suggest that Sabin 1 poliovirus/HIV chimaeras could offer an approach to

the development of a vaccine against HIV.

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carrying a poliovirus immunogen.

AU Delpeyroux F; Coudane R; Blondel B; Horaud F; Valleron Werf S; Girard M; Lagarde D; Mazet M G; Strebeck R E

CS Virologie Medicale, Institut Pasteur, Paris, France.

JO BIOCHIMIE, (1988 Aug) 73 (8) 1065-73.

Journal code: A14. ISSN: 0300-9084.

JY France

IT Journal; Article; JOURNAL ARTICLE

LA English

FS Priority Journals

EM 198906

AB The hepatitis B surface antigen (HBsAg) has the unique property of assembling with cellular lipids into spherical or elongated particles of 22 nm diameter which are secreted by mammalian cells expressing HBsAg. We have studied the structural requirements for particle formation and secretion by creating in phase insertions into different regions of the S gene of the hepatitis B virus, coding for HBsAg. Modified genes were integrated into an appropriate vector and expressed in mouse L cells. Various single and double inserts in the two major hydrophilic domains of HBsAg were compatible with particle synthesis and secretion. The level of secretion was influenced by the length of the insert, its primary structure, and the site of insertion into the HBsAg molecule. One of the inserted sequences was a synthetic DNA fragment encoding a continuous type 1 poliovirus neutralization epitope (the C3 epitope). Mammalian cells expressing the modified hepatitis B virus S gene secreted hybrid particles carrying the poliovirus antigen. The hybrid **polio**-HBsAg particles reacted with a **monoclonal** antibody specific for the C3 epitope and induced poliovirus neutralizing antibodies at low, but significant, titers in mice and at high titers in rabbits. However, the immune response to HBsAg was weaker to hybrid particles than to unmodified HBsAg particles. By cotransfection with two different plasmids carrying either modified or unmodified genes, we obtained phenotypically mixed particles containing both **polio**-HBsAg and HBsAg molecules. Inoculated into rabbits, the mixed particles induced high antibody titers against both poliovirus and HBsAg.

L14 ANSWER 22 OF 31 MEDLINE

AN 89077314 MEDLINE

DN 89077314

TI Structural and antigenic variation of the structural protein VP3 in serotype 1 poliovirus isolated from vaccinees.

AU Cash P

CS Department of Bacteriology, University of Aberdeen, Foresterhill, Scotland.

JO CANADIAN JOURNAL OF MICROBIOLOGY, (1988 Jun) 24 (6) 802-6.

Journal code: Q13. ISSN: 0813-4761.

JY Canada

IT Journal; Article; JOURNAL ARTICLE

LA English

FS Priority Journals

EM 198904

AB High resolution two-dimensional PAGE was used to analyse protein variation among serotype 1 poliovirus isolates. Viruses isolated from patients with recent histories of vaccination with live attenuated poliovirus were compared with prototype serotype 1 polioviruses. The nonvaccine Mahoney poliovirus, which is a serotype 1 poliovirus, was used as a control. The

polio ...

acidic VP3 similar to the nonvaccine type 1 strains. The altered VP3 mobility correlated with a change in antigenicity as determined by **monoclonal** antibodies directed to the neutralization site located on VP3. The data clearly illustrated the suitability of two-dimensional PAGE in analysing protein mutations in attenuated vaccine virus excised by vaccinees.

114 ANSWER 28 OF 31 MEDLINE

AN 88100607 MEDLINE

EN 88100607

TI Role of the LFA-1 molecule in cellular interactions required for antibody production in humans.

AU Fischer A; Durandy A; Sterkers G; Griscelli C

SO JOURNAL OF IMMUNOLOGY, (1988 May 1) 136 (9) 3198-203.

Journal code: JPS. ISSN: 0012-1767.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English

ES Abridged Index Medicus Journals; Priority Journals; Cancer Journals

EM 198617

AB The lymphocyte function-associated antigen 1 (LFA-1) has been shown to play a role in various T cell functions in mice and humans including cytotoxicity, and proliferation to allogeneic cells and foreign antigens. These functions have been defined with specific **monoclonal** antibodies and were additionally confirmed by the investigation of patients with inherited deficiency in membrane LFA-1 expression. In this paper, we report our studies on the potential role of the LFA-1 molecule in T lymphocyte-dependent antibody responses. In a patient with a

complete

lack of membrane expression of LFA-1, there was no in vivo antibody response to vaccinal antigens such as tetanus, diphtheria toxoids, and polio virus, and no in vivo or in vitro antibody production to influenza virus, whereas serum immunoglobulin levels and antibodies to polysaccharides (isonemagglutinins, antibody to mannan, and a polysaccharide from *Candida albicans*) were detected in correlation with

in

vitro production of anti-mannan antibody. The defective antibody response to polypeptides was not secondary to poor antigen-specific T proliferation, because the latter was found to be present. Similarly, in vitro antibody production to influenza virus of normal cells was blocked by several anti LFA-1 **monoclonal** antibodies specific for the alpha subunit of the molecule, if they were added from the beginning of the culture. The antibody production blockade could be achieved with **monoclonal** antibody concentrations that partially preserved T cell proliferation. The helper effect of an influenza virus-specific helper T cell clone was also blocked. The targets of the blockade were shown by incubation experiments to be T cells and monocytes. In contrast, anti LFA-1 **monoclonal** antibodies had no effect on pokeweed mitogen-induced B cell maturation into immunoglobulin-secreting cells.

and

in the anti-mannan antibody production. These combined data demonstrate that the LFA-1 molecule plays a role in T cell-dependent antibody production to polypeptide antigens but not in the antibody response to polysaccharides, although the antibody response to mannan is T cell dependent. It is proposed that the LFA-1 molecule is required to some extent for a antigen-presenting cells-T lymphocyte interaction and for

the

maintenance of a close association between antigen-specific helper T

cell.

115 1988 Jun 1; 136(6):2041-2047

AN 8086166 MEDLINE
 DN 8086166
 TI Hit-and-run neutralization of poliovirus.
 AU Erisen P; Pomkaut B; Booye A
 SO JOURNAL OF GENERAL VIROLOGY, (1985 Nov) 66 (Pt 11) 2495-9.
 Journal code: JPB. ISSN: 0022-1317.
 CY ENGLAND: United Kingdom
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 ES Priority Journals; Cancer Journals
 EM 198602
 AB At physiological ionic strength, **monoclonal** antibody 35-1f4 has previously been shown to neutralize poliovirus type 1 by antibody-mediated polymerization. At low ionic strength, this antibody neutralized the virus

by a hit-and-run mechanism: the virions were converted to non-infectious, empty capsids devoid of antibodies. These empty capsids resembled those formed by thermal denaturation of native **polio** virions in their sedimentation coefficient (S₂₀), antigenicity (H) and isoelectric pH (pI).

L14 ANSWER 23 OF 31 MEDLINE
 AN 86011367 MEDLINE
 DN 86011367
 TI Nuclear localization of poliovirus capsid polypeptide VP1 expressed as a fusion protein with SV40-VP1.
 AU Wychowski C; van der Werf S; Girard M
 SO GENE, 1985) 87 (1-3) 63-71.
 Journal code: FOP. ISSN: 0378-1119.
 CY Netherlands
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 ES Priority Journals
 EM 198612
 AB The poliovirus cDNA fragment coding for capsid polypeptide VP1 was inserted between the EcoRI and BamHI sites of SV40 DNA, generating a chimaeric gene in which the sequence of the 302 amino acids (aa) of poliovirus capsid polypeptide VP1 was placed downstream from that of the 84 N-terminal aa of SV40 capsid polypeptide VP1. The resulting defective, hybrid virus, SV40-delta 1 **polio**, was propagated in CV1 cells using an early SV40 mutant, am404, as a helper. Cells doubly infected by SV40-delta 1 **polio** and am404 expressed a 50-kDal fusion protein which was specifically immunoprecipitated by polyclonal and/or **monoclonal** antibodies raised against poliovirus capsids or against poliovirus polypeptide VP1. Examination of the infected cells by immunofluorescence after staining with anti-poliovirus VP1 immune sera revealed that the fusion protein was mostly located in the intra- and perinuclear space of the cells, in contrast to the exclusively cytoplasmic location of genuine poliovirus VP1 polypeptide that was observed in poliovirus infected cells. This suggests that the N-terminal part of the SV40-VP1 polypeptide could contain an important sequence element acting as a migration signal for the transport of proteins from the cytoplasm to the nucleus.

L14 ANSWER 26 OF 31 MEDLINE
 AN 8517197 MEDLINE
 DN 8517197
 TI New poliovirus vaccines: a molecular approach.
 Journal code: JPB. ISSN: 0022-1317.

IT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 LA English
 ES Priority Journals
 EM 198507
 AB This article summarizes recent work on the determinants of antigenicity
 LI poliovirus type 3 and reports on experiments in progress aimed at
 understanding the molecular basis of attenuation in Sabin's type 3
 vaccines. Ways in which this new information might be used to produce
 alternative, safe, inexpensive, multivalent vaccines against **polio**
 and other enteroviruses are discussed.

L14 ANSWER 27 OF 31 MEDLINE
 AN 85124790 MEDLINE
 DN 85124790
 TI Establishment of 25 hybridomas secreting **monoclonal** antibodies
 against type 1 **polio** viruses (Sabin strain) and their
 application in antigenic analysis.
 AU Gu F Z; Ma G P; Wang Y A
 SO CHUNG-KUO I HSUEH KO HSUEH YUAN HSUEH PAO ACTA ACADEMIAE MEDICINAE
 SINICAE, (1984 Jun) 6 (3) 157-61.
 Journal code: C2S. ISSN: 1000-538X.
 CY China
 DT Journal; Article; (JOURNAL ARTICLE)
 LA Chinese
 EM 198506

L14 ANSWER 28 OF 31 MEDLINE
 AN 85081827 MEDLINE
 DN 85081827
 TI Induction of neutralizing antibody in mice against poliovirus type II
 with

monoclonal anti-idiotypic antibody.
 AU Uytendaeag F G; Osterhaus A D
 SO JOURNAL OF IMMUNOLOGY, (1985 Feb) 134 (2) 1225-9.
 Journal code: IFB. ISSN: 0022-1767.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 ES Abridged Index Medicus Journals; Priority Journals; Cancer Journals
 EM 198504

AB Syngeneic **monoclonal** anti-idiotypic antibody Ab2,2-17C3S0C was
 raised against an idiotope on a protective **monoclonal** antibody
 with specificity for poliovirus type II. Ab2,2-17C3S0C detects a
 paratope-related interspecies IdX. Ab2,2-17C3S0C purified from
 supernatant
 of a hybridoma cell by protein A-Sepharose was injected into 4-
 week old BALB/c mice. The sera of the mice were screened for the
 presence of antibodies bearing the corresponding idiotope. Immunization
 of mice with Ab2,2-17C3S0C induced antibodies of complementary
 specificity. Furthermore, micro IN tests suggest that Ab2,2-17C3S0C can
 substitute for antigen in the induction of anti **polio**
 neutralizing antibodies, and hence can function as a **monoclonal**
 anti-idiotypic vaccine.

L14 ANSWER 29 OF 31 MEDLINE
 AN 85040614 MEDLINE
 DN 85040614
 TI

antibody response in all of the convalescent sera of patients with IF and IHF. Similar NS1-specific isotypic and serotypic antibody responses were found in the sera from IF and DHF patients. The results showed that all IEN infections induced significant NS1-specific IgG, whereas 75% and 60% of primary DF patients vs. 40% and 90% of secondary DF patients produced IgM and IgA antibodies, respectively. Specificity analysis showed that NS1-specific IgG and IgA antibodies cross-react strongly to Japanese encephalitis (JE) virus NS1 glycoprotein, whereas DEN NS1-specific IgM antibodies do not cross-react to JE virus NS1 glycoprotein at all. The serotype specificity of NS1-specific IgM, IgA and IgG were found to be 81%, 60% and 75% for primary infections, and 50%, 22% and 30% for secondary infections in positive samples of DF patients. Similar pattern was found in DHF patients. The results showed that all of the DF and IHF patients produced significant NS1-specific antibodies. We did not observe direct correlation between the anti-NS1 antibody responses and DHF because sera from patients with DF and DHF showed similar anti-NS1 antibody responses. Copyright 2000 Wiley-Liss, Inc.

L17 ANSWER 1 OF 25 MEDLINE
AN 2000345591 MEDLINE
DN 2000345591
TI Isolation and partial characterization of **dengue** virus type 2 and 4 strains from **dengue** haemorrhagic fever patients from Mindanao, Republic of the Philippines.
AU ter Meulen G; Grad M; Lenz G; Emmerich P; Schmitz H; Oh E; Caspert R; Niedrig M
CS Department of Virology, Bernhard Nocht Institute for Tropical Medicine, Hamburg, Germany.. termeulen@bni.uni-hamburg.de
SO TROPICAL MEDICINE AND INTERNATIONAL HEALTH, (2000 May) 5 (5) 325-9.
Journal code: CF5. ISSN: 1360-2275.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200009
EW 20000904
AB OBJECTIVE: Isolation of **dengue** virus from **dengue** fever and **dengue** haemorrhagic fever cases from Mindanao, Republic of the Philippines. METHODS: 12 patients with clinically suspected **dengue** fever (DF) or **dengue** haemorrhagic fever (DHF) presenting in four regional hospitals between August and September 1995 on Mindanao were enrolled in the study. **Dengue** virus was isolated by inoculation of Vero/E6 or C6/36 cells with patient serum. IgM anti-virus were measured using a commercial test system. Up to 454 bp of the 5' non-coding region and 471 bp of the 3' non-coding region of different virus isolates were sequenced and phylogenetically analysed. RESULTS: Virus isolates were isolated from seven patients, five isolates were typed as **dengue** virus type 2 and two as **dengue** virus type 4 by immunostaining with monoclonal antibodies or by RT-PCR. Phylogenetic analysis confirmed a close relationship of the **dengue** virus type 2 isolates with viruses isolated in the Philippines in 1990 and 1991. CONCLUSION: As observed in studies from other parts of South East Asia, **dengue** virus type 2 was readily isolated from patients with **dengue** fever and **dengue** haemorrhagic fever.

EN 2004071
 TI An antigen capture enzyme-linked immunosorbent assay reveals high levels of the **dengue** virus protein NS1 in the sera of infected patients.
 AU Young P R; Hilditch P A; Bletchly C; Halloran W
 CS Sir Albert Sakzewski Virus Research Centre, The Royal Children's Hospital, Herston, Brisbane 4029, Australia.. p.young@mailbox.uq.edu.au
 SO JOURNAL OF CLINICAL MICROBIOLOGY, (2000 Mar) 38 (3) 1053-7.
 Journal code: JCM. ISSN: 0095-1137.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 200406
 EW 20010612
 AB We describe the development of a capture enzyme-linked immunosorbent assay for the detection of the **dengue** virus nonstructural protein NS1. The assay employs rabbit polyclonal and **monoclonal** antibodies as the capture and detection antibodies, respectively. Immunoaffinity-purified NS1 derived from **dengue** 2 virus-infected cells was used as a standard to establish a detection sensitivity of approximately 4 ng/ml for an assay employing **monoclonal** antibodies recognizing a **dengue** 2 serotype-specific epitope. A number of serotype cross-reactive **monoclonal** antibodies were also shown to be suitable probes for the detection of NS1 expressed by the remaining three **dengue** virus serotypes. Examination of clinical samples demonstrated that the assay was able to detect NS1 with minimal interference from serum components at the test dilutions routinely used, suggesting that it could form the basis of a useful additional diagnostic test for **dengue** virus infection. Furthermore, quantitation of NS1 levels in patient sera may prove to be a valuable surrogate marker for viremia. Surprisingly high levels of NS1, as much as 15 microg/ml, were found in acute-phase sera taken from some of the patients experiencing serologically confirmed **dengue** 2 virus secondary infections but was not detected in the convalescent sera of these patients. In contrast, NS1 could not be detected in either acute-phase or convalescent serum samples taken from patients with serologically confirmed primary infection. The presence of high levels of secreted NS1 in the sera of patients experiencing secondary **dengue** virus infections, and in the context of an anamnestic antibody response, suggests that NS1 may contribute significantly to the formation of the circulating immune complexes that are suspected to play an important role in the pathogenesis of severe **dengue** disease.

DT ANSWER 4 OF 24 MEDLINE
 AN 20040707 MEDLINE
 EN 200407
 TI Acute renal failure with neurological involvement in adults associated with measles virus infection.
 AU Wairagkar N S; Gandhi B V; Katrak S M; Shaikh H I; Parikh P R; Wadia N H; Sakthi D A
 CS National Institute of Virology, Pune, India.. icmniv@icmniv.res.nic.in
 SO JAMA, (1999 Sep 14) 282 (9) 1133-5.
 Journal code: J. ISSN: 0098-7418.
 CY ENGLAND; United Kingdom
 DT Journal; Article; (JOURNAL ARTICLE)

failure with neurological involvement of unknown cause were admitted to a hospital in Mumbai, India. We describe clinical presentations and investigations of the cause. METHODS: We analysed case reports and laboratory findings for the patients (age 37-43 years, two men, one

woman

that were provided by the clinicians in charge. Serum and cerebrospinal fluid were tested for viral cause by IgM ELISA to Japanese encephalitis, West Nile fever, **dengue**, and measles. Samples were inoculated in **vero**-cell culture for virus isolation. The virus isolates were confirmed with indirect immunofluorescence with anti-measles immune sera

and

mouse **monoclonal** antibodies to measles HA and F proteins and with neutralisation tests using anti-measles immune sera. FINDINGS: Clinical features were fever, vomiting, oliguria or anuria, bilateral facial weakness, impaired hearing, blindness, proximal and distal areflexic limb paralysis, and respiratory paralysis. No patient had a macropapular rash. Blood urea nitrogen (4.64-27.8 mmol/L) and creatinine (111.1-195.3 micromol/L) were high, and cerebrospinal fluid contained high concentrations of proteins and pleocytosis. Kidney biopsy samples in two patients showed severe interstitial nephritis. IgM antibodies to measles were found in blood and cerebrospinal fluid. **Vero**-cell cultures from serum and cerebrospinal fluid of one patient and cerebrospinal fluid of two patients, showed cytopathic effects characteristic of measles. INTERPRETATION: Unusual manifestations of

acute

renal failure with neurological involvement associated with measles virus in adults presenting without rash was confirmed. Our findings may affect the development of measles-elimination programmes.

L17 ANSWER 5 OF 23 MEDLINE

AN 1998081941 MEDLINE

DN 98081941

TI First record in America of Aedes albopictus naturally infected with **dengue** virus during the 1995 outbreak at Reynosa, Mexico.

AU Ibanez-Bernal S; Briseno B; Mutebi J P; Argut E; Rodriguez G; Martinez-Campos C; Paz R; de la Fuente-San Roman P; Tapia-Conyer R; Elisser A

CS Entomology Department, INDRU, Mexico, D.F. Mexico.

SO MEDICAL AND VETERINARY ENTOMOLOGY, (1997 Oct) 11 (4) 305-9.
Journal code: A90. ISSN: 0269-283X.

CY ENGLAND: United Kingdom

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 199808

EW 19980802

AB Mosquito collections were conducted during a **dengue** outbreak in Reynosa, Tamaulipas, Mexico, July-December 1995. A total of 6694 adult mosquitoes of 10 genera and nine species were captured, of which 2960 (44.2%) females and 1117 males were Aedes albopictus and 238 (35.6%) females and 613 males were Aedes aegypti. These two species comprised 84.2% of the total collection. Specimens were grouped into pools, nearly 10% of them processed for detection of virus by cytopathic effect in C6-36 and **VERO** cell cultures and by haemagglutination test. Five pools gave positive haemagglutination reactions and were examined by immunofluorescence using **monoclonal** antibodies to flavivirus and to **dengue** virus. One pool of ten Ae.albopictus males was positive for **dengue** virus: serotypes 2 and 3 were identified by serotype-specific **monoclonal** antibodies and confirmed by RT-PCR. This is the first record of Ae.albopictus naturally infected with

AN 97042249 MEDLINE
 DN 97042249
 TI **Dengue** 1 virus binding to human hepatoma HepG2 and simian **Vero** cell surfaces differs.
 AU Marianneau P; Megret F; Olivier R; Morens D M; Deubel V
 CS Institut Pasteur, Unité des Arbovirus et Virus des Fièvres
 Hemorragiques,
 Paris, France.
 SO JOURNAL OF GENERAL VIROLOGY, (1996 Oct) 77 (Pt 10) 2547-54.
 Journal code: JGB. ISSN: 0922-1817.
 CY ENGLAND: United Kingdom
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English.
 FS Priority Journals; Cancer Journals
 EM 199712
 EW 199712:4
 AB We analysed the binding and infectivity of **dengue** virus serotype 1 (DEN-1) for the human hepatoma cell line HepG2 in comparison with the simian kidney cell line **Vero**. The higher susceptibility of **Vero** cells to DEN-1 correlated with greater binding affinity of DEN-1 to these cells. In contrast, the capacity of virus attachment was higher for HepG2 than for **Vero** cells. Profiles of DEN-1 binding at different pH were markedly different between the two cell types. A type-specific neutralizing **monoclonal** antibody reduced initial virus binding to both cell types similarly but complex and group-specific neutralizing antibodies affected virus adhesion differently. Altogether, these results suggest the involvement of different receptors or receptors presented in a different environment on the cell surface in the two cell lines. The sensitivity to proteolytic enzymes and to ionic detergent of the binding sites on the two cell types was tested and results indicated that they may be multimeric proteins or protein complexes.

L17 ANSWER 7 OF 23 MEDLINE
 AN 96093349 MEDLINE
 DN 96093349
 TI Detection of **dengue** viral RNA by microplate hybridization.
 AU Ruiz B H; Zamora M P; Liu S
 CS Department of Molecular Biology, National University of Mexico, Ciudad Universitaria, Mexico, D.F.
 SO JOURNAL OF VIROLOGICAL METHODS, (1995 Aug) 54 (2-3) 97-108.
 Journal code: HQR. ISSN: 0166-0934.
 CY Netherlands
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English.
 FS Priority Journals
 EM 199609
 AB **Dengue** virus infection is a major public health problem throughout tropical countries. In endemic areas, **dengue** haemorrhagic fever (DHF) or **dengue** shock syndrome (DSS) are common complications resulting in death. However, for clinical confirmation of **dengue**-related illness is often complicated and time-consuming. Detection of **dengue** viruses in clinical or field samples usually depends on virus isolation in susceptible cell lines or in mice, followed by viral protein identification using polyclonal or **monoclonal** antibodies. The increasing incidence of **dengue** virus infections has prompted increased efforts to develop rapid and sensitive methods for detection of **dengue** virus. Several hybridization methods

encephalitis (JE) virus from different geographic locations was compared. The strain, isolated from Beijing (JE-Bei), did not fuse AP-61 cells after replication (fusion from within; FFWI), whereas all other strains fused these cells by 72 h post-infection. JE-Bei also readily established a non-cytopathic persistent infection in AP-61 cells. Differences in the envelope proteins of fusogenic and non-fusogenic virus were detected by haemagglutination-inhibition tests and by antigenic analysis using **monoclonal** antibodies. Yields of infectious virus in either AP-61 or **Vero** cell cultures were similar if JE-Bei was compared with the fusogenic strain (JE-Sar) but yields of haemagglutinin were 50-100 fold higher with the non-fusogenic virus, implying excessive generation of non-infectious particles. When added directly to AP-61 cell monolayers at pH6, only JE-Bei produced significant fusion from without (FFWO) presumably reflecting the larger quantity of antigen. Cell monolayers persistently infected with JE-Bei or monolayers treated with UV-inactivated JE-Bei, were resistant to superinfection with JE, West Nile and **dengue** 2 viruses but were susceptible to infection with the alphavirus Sindbis. When administered intracerebrally (I/C) to newborn and weanling mice, the viruses were equally neurovirulent. However, fusogenic JE-Sar was significantly more neurovirulent than JE-Bei for weanling mice after intraperitoneal (I/P) or subcutaneous (S/C) inoculation. Mice given non-fusogenic JE-Bei, resisted the peritoneal challenge with fusogenic JE-Sar, and West Nile but not Semliki Forest virus when given 6 h after the first virus. The potential significance of cell fusion by JE virus and interference through over production of non-infectious virus, is discussed in the context of JE virus virulence.

L17 ANSWER 14 OF 23 MEDLINE

AN 91202184 MEDLINE

DN 91202184

TI Production of dimer-specific and **dengue** virus group cross-reactive mouse **monoclonal** antibodies to the **dengue** 2 virus non-structural glycoprotein NS1.

AU Falconar A K; Young P R

CS Wolfson Molecular Biology Unit, London School of Hygiene & Tropical Medicine, U.K.

SO JOURNAL OF GENERAL VIROLOGY, (1991 Apr) 71 (Pt 4) 961-5.

Journal code: JGB. ISSN: 0022-1317.

CI ENGLAND: United Kingdom

DT Journal; Article; (JOURNAL ARTICLE)

LA English.

ES Priority Journals; Cancer Journals

EM 1991

AB A panel of mouse **monoclonal** antibodies (MAbs) raised against the non-structural glycoprotein NS1 of **dengue** 2 virus (DENV-2) was screened for cross-reactivity with the NS1 protein of other **dengue** virus serotypes and other members of the Flaviviridae using immunoblotting. Most of the 35 anti-NS1 MAbs were found to be specific

for **dengue** 2 virus NS1 (some of which were specific for the native, dimeric form of this protein), but others were found to cross-react with

the **dengue** virus group. This latter group of MAbs, although generated by MAbs defining a **dengue** 2 and 4 virus subgroup, all

not necessary; (2) synthetic oligonucleotide for the probe is not needed; (3) the time required for washing of the solid phase is greatly reduced; and (4) baking is eliminated. The results show that this procedure is sensitive, rapid and easy to perform.

L17 ANSWER 8 OF 28 MEDLINE
AN 863865-1 MEDLINE
IN 863865-1
TI Antibody-enhanced binding of **dengue-2** virus to human platelets.
AU Wang S; He R; Patanapornkul J; Innis B L; Anderson R
CS Department of Microbiology and Immunology, Dalhousie University, Halifax, Nova Scotia, Canada..
SO VIROLOGY, (1986 Oct 20) 213 (1) 254-7.
Journal code: NEA. ISSN: 0942-6822.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English.
FS Priority Journals; Cancer Journals
EM 1986C.
AB The mechanisms underlying severe thrombocytopenia in **dengue** hemorrhagic fever/**dengue** shock syndrome (DHF/DSS) are not completely understood. We present here the first evidence that **dengue** type 2 virus binds to human platelets only in the presence of virus-specific antibody, supporting a role for immune-mediated clearance of platelets in the pathogenesis of thrombocytopenia in DHF/DSS. Antibody-enhanced binding of virus of platelets was also demonstrated with a panel of eight murine **monoclonal** antibodies specific for the **dengue** E protein. The degree of binding was dependent on the antibody used but not on the antibody IgG subclass, indicating that factors other than the platelet Fc receptor are involved in binding of virus-antibody complexes to the platelet surface. Confirmation that antibody-dependent virus binding to platelets is not primarily mediated by the platelet Fc receptor was obtained by demonstrating good binding even when platelets were pretreated with the Fc gamma RII-specific antibody IV.3.

L17 ANSWER 9 OF 28 MEDLINE
AN 853854-7 MEDLINE
IN 853854-7
TI Antibodies that block virus attachment to **Vero** cells are a major component of the human neutralizing antibody response against **dengue** virus type 2.
AU He R T; Innis B L; Nisalak A; Usawattanakul W; Wang S; Kalayanarooj S; Anderson R
CS Department of Microbiology and Infectious Diseases, University of Calgary, Alberta, Canada.
SO JOURNAL OF MEDICAL VIROLOGY, (1986 Apr) 47 (4) 471-4.
Journal code: JNM. ISSN: 0140-6619.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English.
FS Priority Journals
EM 1986L.
AB Epidemiological data strongly implicate a role for the host humoral response

in the pathogenesis of the severe form of **dengue**

U.S. Govt. Printing Office

U.S. Govt. Printing Office: Washington, D.C. 20540-4000

dengue-2 virus to monkey kidney (Vero) cells. Since Vero cells possess virus receptors but not Fc receptors we conclude that the major effect of host neutralizing antibodies is to block

virus attachment to Vero cell dengue virus receptors. Analysis of 61 patient antisera yielded good correlation (Pearson's coefficient = 0.90; $P < 0.001$) between neutralizing activity and ability to block virus-cell attachment suggesting that antibody-mediated neutralization of dengue virus occurs primarily extracellularly and less by a postattachment mechanism as has been described for certain other viruses.

L17 ANSWER 10 OF 23 MEDLINE

AN 95374353 MEDLINE

IN 95374353

TI Epitope mapping of dengue 1 virus E glycoprotein using monoclonal antibodies.

AU Simantani E; Banerjee K

CS National Institute of Virology, Pune, India.

SO ARCHIVES OF VIROLOGY, (1995) 143 (7) 1257-73.

Journal code: 8L7. ISSN: 0304-8609.

CY Austria

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals; Cancer Journals

EM 199511

AB Ten monoclonal antibodies (MAbs) were raised against dengue 1 (DEN 1, Hawaii) virus E glycoprotein. Specificity of the MAbs was tested by ELISA and immunofluorescence. Eight were DEN 1 type-specific, one was DEN group-reactive (DGR) and one was flavivirus cross-reactive (FCR). Two of these type specific MAbs exhibited haemagglutination-inhibition (HI) and neutralized (N) DEN 1 virus in vivo (HS). These two MAbs showed 100% protection against a challenge of 100 LD50 of DEN 1 virus in adult Swiss albino mice. The remaining six MAbs were HI negative, N negative and non-protective against challenge (NHS). Of these only three were reactive in the CF test. The DGR, FCR and one of the NHS MAbs (NHS-3) did not react with DEN 1 virus grown in Vero cells, whereas they reacted with DEN 1 virus grown in LLC-MK2 and C6/36 cells in immunofluorescence, probably indicating a difference in the synthesis/processing of viral proteins in these different cell lines. An epitope map of the E gp was drawn using a computer programme based on the additivity index values. The epitope map delineated five domains, a) S-I representing type-specific, HI positive, N positive and protecting MAbs. b) S-II representing type-specific, HI negative, N negative MAbs. c)

S-III representing type-specific HI/N negative MAb, but distinct from S-II. d) IGR representing HI/N negative DEN group reactive MAb. e) FCR

representing

HI/N negative flavivirus cross-reactive MAb. Epitope analysis of a number of different DEN 1 strains isolated in India over a period of 30 years showed that the epitopes S-II and S-III which react with HI negative,

FCR

specific MAbs were variable. The IGR domain and the S-I domain were conserved.

L17 ANSWER 11 OF 23 MEDLINE

AN 94 2484 MEDLINE

IN 94 2484

TI Immunofluorescence Studies on the replication of Dengue Virus in

JT Journal; Article; (JOURNAL ARTICLE)
 LA English
 ES Priority Journals
 EM 199431
 AB Porcine stable kidney PS-1 or **Vero** cells infected with either
 flavi- Japanese encephalitis--JE, West Nile--WN, and **Dengue**
 --DEN-2, or alphaviruses (Chikungunya--CHIK and Sindbis--SIN) were
 stained

in indirect fluorescent antibody (FA) assay with anti-JE virus
monoclonal (MoAb) Hx-3 (flavivirus cross-reactive) and polyclonal
 immune (PF) antibodies. By 48 hr post infection (p.i.), 15 to 20% of the
 three flaviviruses and CHIK virus infected cells, which revealed positive
 cytoplasmic immunofluorescence (IF), showed intranuclear IF. By 24 hr
 p.i., the intranuclear IF was not observed or became diminished. The
 enucleation of cells by cytochalasin B treatment prior to the infection
 with any of the three flaviviruses resulted in the loss of IF compared
 with the cells enucleated after the infection (18 hr p.i.) whereas SIN or
 CHIK virus-infected cells reacted similarly by the either method. These
 findings indicate an essential role of the nucleus in the replication of
 the flaviviruses only and while replicating in the infected cells,
 flaviviruses and CHIK virus might express viral specific proteins in the
 cell nuclei.

LIT ANSWER 12 OF 13 MEDLINE

AN 93212153 MEDLINE

DN 93212153

TI Continuous cell lines and immune ascitic fluid pools in arbovirus
 detection.

AU Digoutte J P; Calvo-Wilson M A; Mondo M; Tricore-Lamizana M; Adam F

CS Institut Pasteur de Dakar..

SO RESEARCH IN VIROLOGY, (1992 Nov-Dec) 143 (6) 417-22.

Journal code: R7E. ISSN: 0923-2516.

CY France

DT Journal; Article; (JOURNAL ARTICLE)

LA English

ES Priority Journals

EM 199317

AB Successive experiments led us to use two cellular systems, MOS61 (Aedes
 pseudocutellaris cells) and **Vero** cells, among the continuous
 cell lines recommended by the WHO Collaborating Center for systematic
 research and isolation of arboviruses. Virus detection in cell cultures

is
 carried out with 7 mixtures containing 10 hyperimmune ascitic fluids made
 with the reference viruses. This technique enables the detection of 70 of
 the 83 arboviruses transmitted by mosquitoes in Africa and very easily
 detects arbovirus associations by using either monospecific or
monoclonal immune ascitic fluids (**dengue**-1-2-3-4 and
 yellow fever viruses) used in the indirect immunofluorescence technique.

LIT ANSWER 12 OF 13 MEDLINE

AN 93212153 MEDLINE

DN 93212153

TI Differences in fastidiousity and neurovirulence of Japanese
 encephalitis viruses.

AU Higgs J; Gould E A

CS MRC Institute of Virology and Environmental Microbiology, Oxford,
 England..

SO ARCHIVES OF VIROLOGY, (1992 Nov-Dec) 119 (6) 117-23.

Journal code: R7E. ISSN: 0923-2516.

CY France

epitopes were previously demonstrated on this glycoprotein using polyclonal sera from **dengue** virus-infected animals and human, this is the first report of the isolation of MAb's which define these determinants and which will allow their further analysis.

L16 ANSWER 15 OF 18 MEDLINE

AN 91201518 MEDLINE

EN 91201518

TI Immunoaffinity purification of native dimer forms of the flavivirus non-structural glycoprotein, NS1.

AU Faloutsos A K; Young I R

CS Sir Albert Sakzewski Virus Research Laboratory, Royal Children's Hospital,

Melbourne, Australia.

SO JOURNAL OF VIROLOGICAL METHODS, (1990 Dec) 30 (3) 323-32.

Journal code: HQ58. ISSN: 0166-0934.

CY Netherlands

DT Journal; Article; (JOURNAL ARTICLE)

LA English

ES Priority Journals

EM 199107

AB The flavivirus non-structural glycoprotein, NS1 has been shown to elicit an immune response in animals which may confer protection from subsequent virus challenge (Schlesinger et al., 1985 and 1987). While previous reports have outlined methods for obtaining cell associated NS1 in monomeric form for these studies, we describe here an efficient method

for the immunoaffinity purification of both cell-associated and secreted NS1 in their native dimeric configuration. These dimer preparations were

shown to be both more antigenic and immunogenic than their monomeric counterparts, a finding which may in part explain the reported failure to obtain solid protection of mice from homologous **dengue** virus challenge. In moderately sized virus growth experiments, greater than 1

mg quantities of purified NS1 were obtained.

L17 ANSWER 16 OF 18 MEDLINE

AN 90362075 MEDLINE

DN 90362075

TI Low pH-induced cell fusion in flavivirus-infected Aedes albopictus cell cultures.

AU Randolph V B; Stollar V

CS Department of Molecular Genetics and Microbiology, Robert Wood Johnson Medical School, University of Medicine and Dentistry of New Jersey, Piscataway 08854..

NC AI-05921 (NIAID)

CA-00000 (NCI)

J JOURNAL OF GENERAL VIROLOGY, 1991, Vol. 72, Pt 1, pp. 1-4

Journal code: I400. ISSN: 0950-2688.

CY ENGLAND; United Kingdom

DT Journal; Article; (JOURNAL ARTICLE)

LA English

ES Priority Journals; Cancer Journals

EM 199112

AB Cell-to-cell fusion of Aedes albopictus (mosquito) cells infected with **dengue** and St Louis encephalitis (SLE) flaviviruses was induced by exposure to low pH. The parameters of this low pH-induced fusion were examined. Syncytium formation was maximal in cultures 30 to 40 h post-infection. The fusion process was dependent on the presence of

Vero cells and the fusion process was dependent on the presence of

Fusion was shown to be ATP-dependent and could be prevented by the addition of either polyclonal antiviral antibody or **monoclonal** antibody to the envelope glycoprotein. The lysosomotropic amine ammonium chloride inhibited the replication of SLE virus in both mosquito and vertebrate cells, consistent with the idea that low pH-induced fusion is necessary for virus entry into both types.

L17 ANSWER 17 OF 13 MEDLINE

AN 91064731 MEDLINE

IN 91064731

TI Immunogenicity of a purified fragment of 17D yellow fever envelope protein.

AU Brandtzen M W; Schlesinger J J; Walsh E E

CS Rochester General Hospital, New York..

SO JOURNAL OF INFECTIOUS DISEASES, (1990 Jun) 161 (6) 1134-9.

Journal code: JIH. ISSN: 0950-2688.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English

ES Abridged Index Medicus Journals; Priority Journals

EM 199035

AB Information on the immunogenic properties of purified flavivirus proteins may be useful in the development of recombinant or synthetic peptide vaccines. Using a **monoclonal** antibody, an attempt was made to purify the envelope (E) protein of 17D yellow fever virus (17D YF) by affinity chromatography. The purified material could not be identified as intact E protein but it did bear antigenic determinants of E as determined

by selective reactivity with anti-E **monoclonal** antibodies.

Rabbits immunized with this material produced antibodies that neutralized 17D YF and **dengue**-2 viruses in comparable titers, indicating that cross-reactive antigenic determinants were preserved. Immunization

of

mice resulted in protection against intracerebral challenge with 17D YF.

L17 ANSWER 18 OF 13 MEDLINE

AN 90158212 MEDLINE

IN 90158212

TI Identification of **monoclonal** antibodies that distinguish between 17D-204 and other strains of yellow fever virus.

AU Barrett A D; Mathews J H; Miller B R; Medlen A R; Ledger T N; Roehrig J T

CS Department of Microbiology, University of Surrey, Guildford, U.K.

SO JOURNAL OF GENERAL VIROLOGY, (1990 Jan) 71 (Pt 1) 13-8.

Journal code: JGV. ISSN: 0022-1317.

CY ENGLAND; United Kingdom

DT Journal; Article; (JOURNAL ARTICLE)

LA English

ES Priority Journal ; Journal Journals

EM 199035

AB Eight **monoclonal** anti-YF MAbs prepared against the flavivirus Saint Louis encephalitis, **dengue** 2 and **dengue** 4 viruses all recognized epitopes on the envelope protein of the prototype flavivirus, yellow fever YF virus. Three of these MAbs with flavivirus group-common specificity and two MAbs with a flavivirus-subgroup specificity were found to distinguish wild-type YF viruses from YF 17D-204 vaccine virus, but not from the closely related YF vaccine virus, nor from the French re-tropic vaccine virus. This pattern of reactivity was seen only with viruses grown in Aedes

AB 1990

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vivo. Neutralization tests showed that all five MBs would neutralize wild-type Asibi virus grown in SW63 cells, but not Asibi virus grown in C6/36 cells, nor 17D-214 vaccine virus grown in either cell type. Therefore, it is concluded that when YF virus is grown in mosquito cells, wild-type virus is antigenically and biologically distinct from the 17D-214 vaccine virus.

L17 ANSWER 19 OF 23 MEDLINE

AN 8917810 MEDLINE

DN 8917810

TI Detection of **dengue** 4 virus core protein in the nucleus. II. Antibody against **dengue** 4 core protein produced by a recombinant baculovirus reacts with the antigen in the nucleus.

AU Makino Y; Tadano M; Anzai T; Ma S P; Yasuda S; Fukunaga T

CS Department of Virology, School of Medicine, University of the Ryukyus, Okinawa, Japan..

SO JOURNAL OF GENERAL VIROLOGY, (1989 Jun) 70 (Pt 6) 1417-25.

Journal code: J9B. ISSN: 0022-1317.

CY ENGLAND: United Kingdom

BT Journal; Article; (JOURNAL ARTICLE)

LA English.

FS Priority Journals; Cancer Journals

EM 198939

AB The **dengue** 4 virus (DEN-4) core gene and part of the PreM genes were inserted into the baculovirus polyhedrin gene region. The recombinant

baculovirus directed the synthesis of the DEN-4 core protein fused to a part of the polyhedrin protein (Mr 25K), as determined by Western blot analysis using DEN-4 core **monoclonal** antibody. A mouse polyclonal antibody prepared against the DEN-4 core fusion protein showed antigenic reactivity with the authentic DEN-4 core protein (Mr 15.5K) present in the nucleus as well as in the cytoplasm of DEN-4-infected **Vero** cells as demonstrated by the peroxidase-antiperoxidase staining method. This antibody did not react with cells infected with DEN-1, -2, -3 or Japanese encephalitis virus, or mock-infected cells.

L17 ANSWER 20 OF 23 MEDLINE

AN 87154129 MEDLINE

DN 87154129

TI **Monoclonal** antibodies against **dengue** 2 virus

E-glycoprotein protect mice against lethal **dengue** infection.

AU Kaufman B M; Summers P L; Dubois D R; Eckels K H

SO AMERICAN JOURNAL OF TROPICAL MEDICINE AND HYGIENE, (1987 Mar) 36 (2) 427-34.

Journal code: 3ZQ. ISSN: 0002-9637.

CY United States

BT Journal; Article; (JOURNAL ARTICLE)

LA English.

FS Antiparasitic Medicines; Cancer; Priority Journal.

EM 198726

AB A panel of 11 murine **monoclonal** antibodies directed against **dengue** type 2 was evaluated for antigen specificity by an immunoblotting assay and Western blot analysis and for in vitro and in

vivo

biological activities. Nine of the 11 **monoclonal** antibodies reacted with viral E-glycoprotein based on the Western blot analysis; one reacted with a 36 Kd protein present in **dengue**-infected C6/36 mosquito cells. The nine E-glycoprotein-reactive **monoclonal** antibodies also neutralized **dengue** 2 virus in a plaque reduction assay. The 11 **monoclonal** antibodies were found to be

L17 ANSWER 21 OF 23 MEDLINE

AN 87189985 MEDLINE

DN 87189985

TI Protection of mice against **dengue 2** virus encephalitis by immunization with the **dengue 2** virus non-structural glycoprotein NS1.

AU Schlesinger J J; Blandriss M W; Walsh E E

SO JOURNAL OF GENERAL VIROLOGY, (1987 Mar) 68 (Pt 3) 853-7.

Journal code: JGB. ISSN: 0022-1317.

CY ENGLAND: United Kingdom

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals; Cancer Journals

EM 1987b

AB Immunization of mice with the **dengue 2** virus (DEN 2)-specified non-structural protein NS1 provided significant protection against intracerebral challenge with the virus in the absence of detectable neutralizing or other anti-virion antibody. NS1, purified from lysates of infected **Vero** cells by immunoaffinity chromatography, expressed an antigenic site(s) common to each of the four DEN serotypes, and hyperimmunization of rabbits with NS1 stimulated production of complement-fixing (CF) antibody with broad DEN serotype specificity. However, cross-protection was not observed: mice immunized with DEN 2 NS1 developed little or no heterologous CF antibody and were not protected against challenge with neurovirulent DEN 1. Induction of a protective immune response by NS1 suggests that it be considered for incorporation into possible synthetic or recombinant DNA DEN vaccines.

L17 ANSWER 22 OF 23 MEDLINE

AN 86114308 MEDLINE

DN 86114308

TI Lethal 17D yellow fever encephalitis in mice. I. Passive protection by **monoclonal** antibodies to the envelope proteins of 17D yellow fever and **dengue 2** viruses.

AU Blandriss M W; Schlesinger J J; Walsh E E; Briselli M

SO JOURNAL OF GENERAL VIROLOGY, (1986 Feb) 67 (Pt 2) 129-34.

Journal code: JGB. ISSN: 0022-1317.

CY ENGLAND: United Kingdom

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals; Cancer Journals

EM 198605

AB **Monoclonal** antibodies to the envelope proteins (E) of the 17D vaccine strain of yellow fever virus (17D YF) and to **dengue 2** virus were examined for their ability to confer passive protection against

lethal 17D YF encephalitis in mice. All 13 IgG anti-17D YF antibodies, regardless of neutralizing capacity, conferred full protection when given

on a relatively high dose prior to intracerebral inoculation of virus. Three antibodies with high in vitro neutralizing titres were all protective at a low dose as were several nonneutralizing antibodies. A flavivirus group-reactive antibody to **dengue 2** virus conferred similar protection at low dose. Protection was also observed when antibodies were given several days after virus inoculation when peak infectious virus titres and histopathological evidence of infection were present in brains. The ability of a nonneutralizing antibody to protect against the attenuated complement-dependent lysis of virus-infected cells was also examined. The results suggest that the protective effect of

may be relevant to the design of prospective flavivirus vaccines and support the possibility of conferring broadened protection among flaviviruses by stimulating the antibody response to appropriate epitopes of the E protein.

L17 ANSWER 13 OF 23 MEDLINE
AN 85177217 MEDLINE
DN 85177217
TI [Dengue in Burkina Faso (ex-Upper Volta): seasonal epidemics in the urban area of Ouagadougou].
La dengue au Burkina Faso (ex-Haute-Volta): épidémies saisonnières en milieu urbain à Ouagadougou.
AU Gonzalez J P; Du Saussay C; Gautun J C; McCormick J B; Mauchet J
SO BULLETIN DE LA SOCIETE DE PATHOLOGIE EXOTIQUE ET LE SES FILIALES, (1985) 78 (1) 7-14.
Journal code: C43. ISSN: 1047-9015.
CY France
DT Journal; Article; (JOURNAL ARTICLE)
LA French
ES Priority Journals
EM 19851-
AB During the rainy season of 1982 30 patients (29 european and 1 voltaic) presented with an intense dengue-like syndrome in Ouagadougou city. 73.3% of these cases possessed anti-flavivirus fluorescent antibodies while 30% were positive for specific anti-Dengue IgM antibodies. Vero type E 6 cell cultures were used to isolate six strains of Dengue 2 virus; monoclonal antibodies were used for viral identification. These strains constitute the first isolates of human Dengue virus in Upper Volta. Authors present conditions of virus isolations, describe the observed syndrome and discuss the epidemiological interest of this outbreak.

=> s 117 and 15

L18 6 L17 AND L5

=> d 118 1-6 bib ab

L19 ANSWER 1 OF 6 MEDLINE
AN 85094678 MEDLINE
DN 85094678
TI Dengue NS1-specific antibody responses: isotype distribution and serotyping in patients with Dengue fever and Dengue Hemorrhagic fever.
AU Lin I Y; Chen L K; Chang J F; Yeh Y Y; Hsu L; Chen L J; Chin C; Lin T H; Huang Y H
SO Division of Vector-borne Infectious Diseases, Center for Disease Control, Department of Health, Taipei, Taiwan, Republic of China.
JO JOURNAL OF MEDICAL VIROLOGY, 1986, Vol 38, Iss 1, 124-32.
Journal code: JCM. ISSN: 0144-6615.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
ES Priority Journals
EM 19861-
AB To understand the antibody response to dengue NS1

monoclonal antibodies were prepared by immunizing mice

capture soluble NS1 antigens secreted in the culture supernatants of Vero cells infected with IEN virus. We observed strong anti-NS1 antibody responses in all of the convalescent sera of patients with DF and DHF. Similar NS1-specific isotypic and serotypic antibody responses were found in the sera from IF and DHF patients. The results showed that all IEN infections induced significant NS1-specific IgG, whereas 75% and 60% of primary DF patients vs. 40% and 90% of secondary DF patients produced IgM and IgA antibodies, respectively. Specificity analysis showed that NS1-specific IgG and IgA antibodies cross-react strongly to Japanese encephalitis (JE) virus NS1 glycoprotein, whereas DEN NS1-specific IgM antibodies do not cross-react to JE virus NS1 glycoprotein at all. The serotype specificity of NS1-specific IgM, IgA and IgG were found to be 80%, 67% and 75% for primary infections, and 50%, 22% and 30% for secondary infections in positive samples of DF patients. Similar pattern was found in DHF patients. The results showed that all of the DF and DHF patients produced significant NS1-specific antibodies. We did not observe direct correlation between the anti-NS1 antibody responses and DHF because sera from patients with DF and DHF showed similar anti-NS1 antibody responses. Copyright 2000 Wiley-Liss, Inc.

LI8 ANSWER 2 OF 6 MEDLINE

AN 2000184671 MEDLINE

DN 200104071

TI An antigen capture enzyme-linked immunosorbent assay reveals high levels of the dengue virus protein NS1 in the sera of infected patients.

AU Young P B; Hilditch P A; Bletchly C; Halloran W

CS Sir Albert Sakzewski Virus Research Centre, The Royal Children's Hospital,

Herston, Brisbane 4029, Australia.. p.young@mailbox.uq.edu.au

SO JOURNAL OF CLINICAL MICROBIOLOGY, (2000 Mar) 38 (3) 1051-7.

Journal code: HSH. ISSN: 0095-1137.

CI United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 200006

EW 20000602

AB We describe the development of a capture enzyme-linked immunosorbent assay

for the detection of the dengue virus nonstructural protein NS1. The assay employs rabbit polyclonal and monoclonal antibodies as the capture and detection antibodies, respectively. Immunoaffinity-purified NS1 derived from dengue 2 virus-infected cells was used as a standard to establish a detection sensitivity of approximately 4 ng/ml for an assay employing monoclonal antibodies recognizing a dengue 2 serotype-specific epitope. A number of serotype 2 monoclonal antibodies were also shown to be suitable probes for the detection of NS1 expressed by the remaining three dengue virus serotypes. Examination of clinical samples demonstrated that the assay was able to detect NS1 with minimal interference from serum components at the test dilutions

routinely

used, suggesting that it could form the basis of a useful additional diagnostic test for dengue virus infection. Furthermore, quantitation of NS1 levels in patient sera may prove to be a valuable tool for the diagnosis of dengue. Significantly high levels of NS1, as such,

BT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 198411

AB Hybridoma cell lines secreting **monoclonal** antibodies to type 3 poliovirus were prepared, and their reactivity with infectious virus (I antigen), empty particles (C antigen), and isolated virion capsid proteins

VPs were examined. Eight antibodies reacted with epitopes common to I and C antigens, and all of these possessed high titers of neutralizing activity. However, only 12 of 19 antibodies that reacted exclusively with I antigen neutralized virus infectivity, and some of these reacted only with strains of virus with TI-oligonucleotide maps identical or similar

to

that of Sabin vaccine **polio** virus. These antibodies will be of value in identifying strains of virus derived from Sabin vaccine. None of the 11 **monoclonal** antibodies that neutralized type 3 poliovirus strains reacted in immunoblot experiments with isolated virion capsid proteins. However, six of the 24 antibodies that reacted only with noninfectious C antigen bound to VP1 and VP3, and three of these antibodies also reacted with proteins of poliovirus types 1 or 2. The

lack

of reactivity of neutralizing **monoclonal** antibodies with isolated viral proteins suggests that the antigenic properties of

proteins

are determined by their arrangement in the virus and not simply by amino acid sequence.

L14 ANSWER 31 OF 31 MEDLINE

AN 88109464 MEDLINE

DN 88109464

TI Antibodies to poliovirus detected by immunoradiometric assay with a **monoclonal** antibody.

AU Spitz M; Fissati C A; Schild G C; Spitz L; Brasher M

SO JOURNAL OF VIROLOGICAL METHODS, (1982 Oct) 5 (2) 101-11.

Journal code: HPR. ISSN: 0166-0934.

CY Netherlands

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 198305

AB An immunoradiometric assay (IRMA) for the assay of antibodies to poliovirus antigens is described. Dilutions of the test sera or whole (finger prick) blood samples were incubated with the Poliovirus antigen bound to a solid phase and the specific antibody was detected by the addition of a mouse anti-human IgG **monoclonal** antibody (McAb), which was itself revealed by iodinated sheep IgG anti-mouse F(ab). We

have

shown that this technique is suitable for the estimation of IgG anti-poliovirus antibody in children following **polio** vaccine. The present study shows that IRMA provides a simple and inexpensive method for serological studies with poliovirus, particularly for use in large-scale surveys.

L14 ANSWER 31 OF 31 MEDLINE

AN 88109464 MEDLINE

DN 88109464

TI Immunoradiometric assay of **monoclonal** antibodies against **polio** viruses.

ES Priority Journals
 EM 1981,
 AB Lymphocyte hybridomas secreting **monoclonal** antibodies against
 different strains of **polio** virus type 1, 2, or 3 have been
 produced. For this purpose Balb/C mice were immunized with purified and
 inactivated virus suspensions and their splenocytes were fused with
 EBX68A8 mouse myeloma cells. Screening for antibody production was
 performed in an enzyme-linked immunosorbent assay (ELISA). Antibodies
 were produced either in cell culture or in Balb/C mice by passaging the
 hybridomas as solid or ascitic tumors, after they had been cloned at
 least three times by limiting dilutions in microtiter plates. Specificities of
 a number of these **monoclonal** antibodies were determined in the
 ELISA and in a neutralization test using different **polio** virus
 subtypes. The results indicate that for epidemiological studies
monoclonal antibodies may prove to be very useful tools. Also the
 use of **monoclonal** antibodies for vaccine production (affinity
 chromatography; characterization of viral substructures) and routine
 vaccine control purpose (antigen quantification; neutralization of
 vaccine virus) seems attractive. Two of the neutralizing **monoclonal**
 antibodies against **polio** virus type 1, showed a selective
 immunoprecipitation with VP1, which suggests that VP1 is an important
 polypeptide for the induction of neutralizing antibody in vivo.

=> s dengue

L16 3233 DENGUE

=> s L16 and L3 and L4

L17 23 L16 AND L3 AND L4

=> d L17 1-23 bib ab

L17 ANSWER 1 OF 23 MEDLINE

AN 800450781 MEDLINE

DN 80459477

TI **Dengue** NS1-specific antibody responses: isotype distribution and
 serotyping in patients with **Dengue** fever and **Dengue**
 hemorrhagic fever.

AU Shu I Y; Chen L K; Chang S F; Yuen Y Y; Chow L; Chien L J; Chin C; Lin T
 H; Huang J H

AD Division of Vector-borne Infectious Diseases, Center for Disease Control,
 Department of Health, Taipei, Taiwan, Republic of China.

J JOURNAL OF MEDICAL VIROLOGY, 1981, Vol 26, No 2, 234-241.

PMID 6841041. 1981. ISSN: 0146-6713.

PT United States

DT Journal; Article; JOURNAL ARTICLE

LA English

ES Priority Journals

EM 1981

AB To understand the antibody responses to **dengue** (DENV)

structural 1 (NS1) glycoprotein and their roles in protective immunity
 and pathogenesis of **dengue** fever (DF) and **dengue**

Vero cells infected with DENV-2 and DENV-4 were used to study the

serologically confirmed primary infection. The presence of high levels of secreted NS1 in the sera of patients experiencing secondary **dengue** virus infections, and in the context of an anamnestic antibody response, suggests that NS1 may contribute significantly to the formation of the circulating immune complexes that are suspected to play an important role in the pathogenesis of severe **dengue** disease.

LI# ANSWER 3 OF 6 MEDLINE
AN 1998091941 MEDLINE
IN 98091941
TI First record in America of Aedes albopictus naturally infected with **dengue** virus during the 1995 outbreak at Reynosa, Mexico.
AU Ibanez-Bernal S; Briseno B; Mutebi J P; Argot E; Rodriguez B; Martinez-Campos C; Paz R; de la Fuente-Sal-Roman P; Tapia-Conyer R; Flisser A
CS Entomology Department, INIRE, Mexico, D.F. Mexico.
SO MEDICAL AND VETERINARY ENTOMOLOGY, (1997 Oct) 11 (4) 305-9.
Journal code: A90. ISSN: 0829-233X.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English.
FS Priority Journals
EM 199809
EW 19980502
AB Mosquito collections were conducted during a **dengue** outbreak in Reynosa, Tamaulipas, Mexico, July-December 1995. A total of 6694 adult mosquitoes (four genera and nine species) were captured, of which 2986 (78.3% females and 21.7% males) were Aedes albopictus and 2339 (39.7% females and 60.3% males) were Ae.aegypti. These two species comprised 84.2% of the total collection. Specimens were grouped into pools, nearly 50% of them processed for detection of virus by cytopathic effect in C6-36 and **VERO** cell cultures and by haemagglutination test. Five pools gave positive haemagglutination reactions and were examined by immunofluorescence using **monoclonal** antibodies to flavivirus and to **dengue** virus. One pool of ten Ae.albopictus males was positive for **dengue** virus: **serotypes** 2 and 3 were identified by **serotype**-specific **monoclonal** antibodies and confirmed by RT-PCR. This is the first report of Ae.albopictus naturally infected with **dengue** virus in America. Also, it is the very first time Ae.albopictus males have been found infected with **dengue** virus in the wild.

LI# ANSWER 4 OF 6 MEDLINE
AN 97042289 MEDLINE
DN 97042289
TI **Dengue** 1 virus binding to human hepatoma HepG2 and simian **Vero** cell surfaces differs.
AU Marandani H; Monnet F; Olivier P; Merens J M; Leclerc V
AF Institut Pasteur, Unite des Arbovirus et Virus des Filaires, France
AB Mosquito, Paris, France.
S. JOURNAL OF GENERAL VIROLOGY, 1997 Oct, 78(10) 2181-2184.
Journal code: J98. ISSN: 0950-2688.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English.
FS Priority Journals; Cancer Journals
EM 199704
EW 19970401

... **Dengue** 1 virus binding to human hepatoma HepG2 and simian **Vero**

as formulations may be improved by the addition of trypsin treated type 3, suggested by Polvainen and Hovi (J Virol 1987; 61: 3749-3753), but not by the addition of trypsin treated type 3 poliovirus.

L14 ANSWER 9 OF 31 MEDLINE

AN 94253144 MEDLINE

DN 94253144

TI A novel member of the immunoglobulin gene superfamily expressed in rat carcinoma cell lines [published erratum appears in J Biol Chem 1991 Sep 1;271(5):10879].

AU Chadenoud C; LeMoullac B; Denis M G

CS Department of Medical Biochemistry, INSERM CUF 90-11, Nantes, France.

SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1994 Jun 3) 269 (22) 15601-5.

Journal code: HIV. ISSN: 0021-9258.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English.

FS Cancer Journals; Priority Journals

OS GENBANK-L11025

EM 199409

AB Defined by monoclonal antibody E4, the pE4 antigen is a 66,000-Da glycoprotein which is expressed at the cell surface of rat colon

and mammary carcinomas, but only in trace amounts in normal adult rat tissues. To determine the structure of this tumor-associated antigen and to identify its functional domains, we have cloned a cDNA coding for this protein. It encodes a 416-amino acid protein with an expected molecular weight for the core protein of approximately 42,000. The predicted amino acid sequence reveals that pE4 contains the conserved amino acids and domain structures characteristic of members of the immunoglobulin gene superfamily. Comparison of this sequence with data banks revealed a significant homology with the human and mouse receptors for polio-virus. However, pE4 is not the rat receptor for poliovirus, as different patterns were obtained by hybridization of rat genomic DNA with both probes. A major approximately 2.2-kilobase transcript of the pE4 gene was detected in all the rat tumor cell lines tested. In contrast, barely detectable levels of pE4 mRNA were found in normal adult rat tissues.

L14 ANSWER 10 OF 31 MEDLINE

AN 92376407 MEDLINE

DN 92376407

TI Using the virus challenge dose in the analysis of virus neutralization assays.

AU Parker R A; Pallansch M A

CS Department of Preventive Medicine, Vanderbilt University School of Medicine, Nashville, TN 37232-2037..

SO JOURNAL OF VIREOLOGY

Journal code: HIV. ISSN: 0021-9258.

DT JOURNAL; Article; (JOURNAL ARTICLE)

LA English.

FS Priority Journals

OS GENBANK-L11025

EM 199409

AB We propose a new basis for adjusting the results of virus neutralization

assays. These assays consist of two separate experiments performed in parallel: a virus titration experiment and a serum dilution assay. In the

results only to ensure that the overall experiment is acceptable; the specific results of the virus titration experiment are not used to adjust the estimate of serum neutralizing activity. Although adjustment based on calibration with reference sera could be done, this seldom occurs in practice. We use results from recent studies of the kinetics and stoichiometry of **polio** virus neutralization with **monoclonal** antibodies to develop a method to use results from the virus titration experiment to adjust the serum neutralizing activity directly. Our results also indicate that a simple ad hoc procedure can improve the accuracy of the estimated serum neutralizing activity.

114 ANSWER 11 OF 31 MEDLINE

AN 82351044 MEDLINE

IN 82351044

TI Isolation of polioviruses from sewage and their characteristics: experience over two decades in Sweden.

AU Bottiger M; Hirstrom E

CS Department of Epidemiology, National Bacteriological Laboratory, Stockholm, Sweden..

SO SCANDINAVIAN JOURNAL OF INFECTIOUS DISEASES, (1992) 24 (2) 151-5. Journal code: JEX. ISSN: 0950-8642.

CY Sweden

DT Journal; Article; (JOURNAL ARTICLE)

LA English.

FS Priority Journals

EM 199211

AB Indigenous **polio** ceased in Sweden in 1962 after 5 years' use of killed **polio** vaccine. In 1967, it was considered of interest to investigate whether poliovirus was present in the sewage. A method for selective isolation of poliovirus from sewage was developed. The method appeared to increase the yield. The studies were carried out at intervals up to 1990. In 1989-90, the virus isolates were characterized by the use of **monoclonal** antibodies differentiating between vaccine-like (Sabin-like) and non-vaccine-like strains. Polioviruses of both kinds

were

isolated throughout the period. Two periods were of special interest. The first was in 1977, when a single, paralytic, type-2 case occurred in Sweden in an unvaccinated sect. The second was in 1984-85 when a type-3 epidemic broke out in Finland, followed by vaccinations of the whole Finnish population with live oral **polio** vaccine. On both occasions the implicated viruses could be traced to a high degree in sewage in Sweden. The absence of poliovirus isolations from faecal specimens of patients and the isolation of live poliovirus vaccine virus, i.e. a vaccine not used in Sweden, indicate that the virus strains are imported.

114 ANSWER 12 OF 31 MEDLINE

AN 8244701 MEDLINE

IN 8244701

TI Application of **monoclonal** antibody panels in the epidemiological and epidemiological review of poliomyelitis in Poland, 1991-1992.

AU Tomaszek Z; Zalcicka J; Lich A; Howlett G; Dunn G; Wood J

CS Department of Virology, National Institute of Hygiene, Warsaw, Poland.

SO BULLETIN OF THE WORLD HEALTH ORGANIZATION, (1992) 70 (3) 327-33. Journal code: C83. ISSN: 1042-9686.

CY Switzerland

DT Journal; Article; (JOURNAL ARTICLE)

LA English.

EM 199211

serotype 4; **serotype 2** circulated intermittently and **serotype 3** was rarely absent (only one subgroup strain was detected). Two electropherotypes, bbba and cbba, accounted for the largest proportion of the 345 HRV strains examined, 74 (21.4%) and 222 (64.3%) strains, respectively. Unexpected combinations of subgroup, **serotype** and electropherotype were detected in 5 subgroup I strains, of which 4 possessed a "long" FNA pattern (1 **serotype 3** and 3 **serotype 4** strains) and one a "short" FNA pattern (a **serotype 4** strain). In addition, 4 group C HPV strains (atypical HRV or parainfluenzae) were detected on the basis of electropherotype. These findings emphasize the need for continuous surveillance of HRV infections in different geographic areas of the world in order to detect the appearance of new strains early and to adopt adequate strategies for vaccine preparation and administration.

111 ANSWER 21 OF 32 MEDLINE

AN 91146078 MEDLINE

IN 91146078

TI Evaluation of three panels of **monoclonal** antibodies for the identification of human **rotavirus** VP7 **serotype** by ELISA.

AU Green K Y; James H D Jr; Kapikian A Z

CS Laboratory of Infectious Diseases, National Institute of Allergy and Infectious Diseases, National Institutes of Health (NIH), Bethesda, MD 20892.

SO BULLETIN OF THE WORLD HEALTH ORGANIZATION, (1990) 68 (5) 601-10. Journal code: C40. ISSN: 0042-9686.

CI Switzerland

DT Journal; Article; (JOURNAL ARTICLE)

LA English

EM 199106

AB Three panels of **monoclonal** antibodies used for **rotavirus** **serotype** identification by enzyme-linked immunosorbent assay (ELISA) were evaluated at the National Institutes of Health, USA, to identify antibodies suitable for distribution to laboratories involved in WHO-sponsored trials of **rotavirus** vaccines. Two of the panels were comparably effective in identifying the **serotype** of each of the human **rotavirus** reference strains of **serotype** 1, 2, or 3. In addition, one of the panels included a **monoclonal** antibody that was effective in identifying strains of **serotype** 4. However, two different lots of a third, commercially available panel were not effective in identifying the eight strains representing the four **serotypes**. A third shipment of this panel was therefore tested using revised instructions and, under these conditions, it was effective in serotyping seven of the eight reference strains. It appears that a battery of **monoclonal** antibodies for each **serotype** may be required to identify antigenic variants within a **serotype**. Additional studies are needed to assess the extent of antigenic variation in **rotavirus** field strains.

111 ANSWER 22 OF 32 MEDLINE

AN 91146079 MEDLINE

IN 91146079

TI **Serotype** variation of human group A rotaviruses in two regions of the USA.

AU Kaper J B; Estes M K; Burns J W; Greenberg H B; Taniguchi K; Urasawa S

CS Department of Pediatrics, Baylor College of Medicine, Houston, Texas

EM 199106

AB Rotavirus is the most common cause of acute gastroenteritis in children. The purpose of this study was to determine the extent of antigenic variation in rotavirus field strains.

AB Rotavirus is the most common cause of acute gastroenteritis in children. The purpose of this study was to determine the extent of antigenic variation in rotavirus field strains.

L18 ANSWER 3 OF 6 MEDLINE
 AN 1998091941 MEDLINE
 DN 98091941
 TI First record in America of Aedes albopictus naturally infected with **dengue** virus during the 1995 outbreak at Reynosa, Mexico.
 AU Ibanez-Bernal S; Briseno B; Mutebi J P; Argot E; Rodriguez G; Martinez-Campos C; Paz E; de la Fuente-San Roman P; Tapia-Conyer R; Flisser A
 CS Entomology Department, INDRE, Mexico, D.F. Mexico.
 SO MEDICAL AND VETERINARY ENTOMOLOGY, (1997 Oct) 11 (4) 305-9.
 Journal code: A90. ISSN: 0269-283X.
 CY ENGLAND: United Kingdom
 DT Journal: Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 199805
 EW 19980502
 AB Mosquito collections were conducted during a **dengue** outbreak in Reynosa, Tamaulipas, Mexico, July-December 1995. A total of 6694 adult mosquitoes (four genera and nine species) were captured, of which 2986 (44.6% females and 21.7% males) were Aedes albopictus and 2339 (39.7% females and 60.3% males) were Ae.aegypti. These two species comprised 84.2% of the total collection. Specimens were grouped into pools, nearly 50% of them processed for detection of virus by cytopathic effect in C6-36 and **VERO** cell cultures and by haemagglutination test. Five pools gave positive haemagglutination reactions and were examined by immunofluorescence using **monoclonal** antibodies to flavivirus and to **dengue** virus. One pool of ten Ae.albopictus males was positive for **dengue** virus: **serotypes** 2 and 3 were identified by **serotype**-specific **monoclonal** antibodies and confirmed by RT-PCR. This is the first report of Ae.albopictus naturally infected with **dengue** virus in America. Also, it is the very first time Ae.albopictus males have been found infected with **dengue** virus in the wild.

L18 ANSWER 4 OF 6 MEDLINE

patterns of various viruses with the N-MABs used for selection of mutants.

A synthetic peptide (amino acids 296 to 313) which included the sequence of epitope I reacted with its corresponding N-MAB, suggesting that the region contains a sequential antigenic determinant. These data may prove useful in current efforts to develop **vaccines** against human **rotavirus** infection.

L11 ANSWER 28 OF 31 MEDLINE

AN 88108819 MEDLINE

DN 88108819

TI Serotyping of **rotavirus** by NADP-enhanced enzyme-immunoassay.

AU Beards G M

CS Regional Virus Laboratory, East Birmingham Hospital, U.K..

SO JOURNAL OF VIROLOGICAL METHODS, (1987 Nov) 18 (2-3) 77-85.

Journal code: HQ5. ISSN: 0166-0934.

CI Netherlands

DT Journal; Article; (JOURNAL ARTICLE)

LA English.

FS Priority Journals

EM 1988

AB A method is described for the serotyping of rotaviruses directly from samples of faeces. **Serotype**-specific **monoclonal** antibodies were used in a solid phase enzyme-immunoassay utilising a novel

substrate system based on the de-phosphorylation of NADP, followed by cycling colour reaction. This method is shown to be approximately 5-10 times more specific and sensitive than assays utilising a conventional substrate for alkaline phosphatase, and allowed **serotypes** to be ascribed to samples which could not be typed by other methods. The value of this method for **rotavirus** epidemiology and **vaccine** trials is discussed.

L11 ANSWER 29 OF 32 MEDLINE

AN 88108874 MEDLINE

DN 88108874

TI Epitope-specific immune responses to **rotavirus** vaccination.

AU Shaw F D; Fing K J; Losonsky G A; Levine M M; Maldonado Y; Yolken R;

Flores J; Kapikian A Z; Vo P T; Greenberg H B

CS Department of Medicine, Stanford University School of Medicine, California.

SO GASTROENTEROLOGY, (1987 Nov) 93 (5) 941-50.

Journal code: FH3. ISSN: 0016-5085.

CI United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English.

FS Abridged Index Medicus Journals; Priority Journals; Cancer Journals

EM 1988

AB **Rotavirus** gastroenteritis is a leading cause of infant mortality in developing countries and an important cause of morbidity in children under 5 yr of age in the United States. **Vaccine** programs have evaluated animal **rotavirus** strains that are attenuated in humans but antigenically similar to some human strains. Whether a single **vaccine** strain can elicit protective immunity in humans to rotaviruses of the same or different **serotypes** is an important question in determining **vaccine** efficacy. We used characterized **serotype**-specific **monoclonal** antibodies directed at VP7 in a competitive solid phase immunoassay to measure epitope-specific immune responses to **serotypes** 1, 2, and 3 in sera of children.

serotype 1 rotavirus

Profiles of DEN-1 binding at different pH were markedly different between the two cell types. A type-specific neutralizing **monoclonal** antibody reduced initial virus binding to both cell types similarly but complex- and group-specific neutralizing antibodies affected virus adhesion differently. Altogether, these results suggest the involvement

of

different receptors or receptors presented in a different environment on the cell surface in the two cell lines. The sensitivity to proteolytic enzymes and to ionic detergent of the binding sites on the two cell types was tested and results indicated that they may be multimeric proteins or protein complexes.

118 ANSWER 3 OF 6 MEDLINE

AN 9102184 MEDLINE

DN 9102184

TI Production of dimer-specific and **dengue** virus group cross-reactive mouse **monoclonal** antibodies to the **dengue** 2 virus non-structural glycoprotein NS1.

AU Falconar A P; Young P R

CS Wolfson Molecular Biology Unit, London School of Hygiene & Tropical Medicine, U.K.

SO JOURNAL OF GENERAL VIROLOGY, (1991 Apr 22 (Pt 4) 561-5.

Journal code: JGB. ISSN: 0022-1317.

CY ENGLAND: United Kingdom

BT Journal; Article. (JOURNAL ARTICLE)

LA English.

FS Priority Journals; Cancer Journals

EM 199107

AB A panel of mouse **monoclonal** antibodies (MAbs) raised against the non-structural glycoprotein NS1 of **dengue** 2 virus (PR159) was studied for cross-reactivity with the NS1 protein of other **dengue** virus **serotypes** and other members of the Flaviviridae using immunoblotting. Most of the 35 anti-NS1 MAbs were found to be specific

for

dengue 2 virus NS1 (some of which were specific for the native, dimeric form of this protein), but others were found to cross-react

within

the **dengue** virus group. This latter group of MAbs, although dominated by MAbs defining a **dengue** 2 and 4 virus subgroup, also contained some MAbs that were shown to cross-react with both linear (sequential) and conformational epitopes common to the NS1 glycoproteins of all four **dengue** virus **serotypes**. Several of these MAbs were also able to cross-react with other flaviviruses, most notably viruses from the Japanese encephalitis antigenic complex. Although cross-reactive epitopes were previously demonstrated on this glycoprotein using polyclonal sera from **dengue** virus-infected animals and human, this is the first report of the isolation of MAbs which define these determinants and which will allow their further analysis.

119 ANSWER 4 OF 6 MEDLINE

AN 9102005 MEDLINE

DN 9102005

TI Protection of mice against **dengue** 2 virus encephalitis by immunisation with the **dengue** 2 virus non-structural glycoprotein NS1.

AU Schlesinger J J; Diandria M W; Walsh E E

SO JOURNAL OF GENERAL VIROLOGY, (1987 Mar 22 (Pt 3) 453-7.

Journal code: JGB. ISSN: 0022-1317.

CY ENGLAND: United Kingdom

BT Journal; Article. (JOURNAL ARTICLE)

LI1 ANSWER 29 OF 32 MEDLINE

AN 88005674 MEDLINE

DN 88005674

TI Epitope-specific immune responses to **rotavirus** vaccination.

AU Shaw R D; Fong K J; Losonsky G A; Levine M M; Maldonado Y; Yolken R;
Flores J; Kapikian A Z; Vo P T; Greenberg H B

CS Department of Medicine, Stanford University School of Medicine,
California.

SO GASTROENTEROLOGY, (1987 Nov) 93 (5) 941-50.

Journal code: FH3. ISSN: 0016-5085.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English.

FS Abridged Index Medicus Journals; Priority Journals; Cancer Journals

EM 198831

AB **Rotavirus** gastroenteritis is a leading cause of infant mortality in developing countries and an important cause of morbidity in children under 2 yr of age in the United States. **Vaccine** programs have evaluated animal **rotavirus** strains that are attenuated in humans but antigenically similar to some human strains. Whether a single **vaccine** strain can elicit protective immunity in humans to **rotaviruses** of the same or different **serotypes** is an important question in determining **vaccine** efficacy. We used characterized **serotype**-specific **monoclonal** antibodies directed at VP7 in a competitive solid-phase immunoassay to measure epitope-specific immune responses to **serotypes** 1, 2, and 3 in sera of children who received a candidate **serotype**-3 **rotavirus vaccine**. Antibodies to **serotype** 3 were detected in 72% of sera samples, and to **serotype** 1 and 2 in only 11% each. Also, a VP6-specific **monoclonal** antibody which neutralizes three serotypically distinct strains of **rotavirus** was used to detect the presence of similar antibodies in 56% of the test sera. This finding

L14 ANSWER 31 OF 31 MEDLINE

AN 82137578 MEDLINE

DN 82137578

TI Production and potential use of **monoclonal** antibodies against **polio** viruses.

AU Osterhaus A D; van Wezel A L; van Steenis G; Hazendonk A G; Drost G

SO DEVELOPMENTS IN BIOLOGICAL STANDARDIZATION, (1981) 50 221-8.

Journal code: E7V. ISSN: 0301-5149.

CY Switzerland

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 198209

AB Lymphocyte hybridomas secreting **monoclonal** antibodies against different strains of **polio** virus type 1, 2, or 3 have been produced. For this purpose Balb/C mice were immunized with purified and inactivated virus suspensions and their splenocytes were fused with P3X63Ag8 mouse myeloma cells. Screening for antibody production was performed in an enzyme-linked immunosorbent assay (ELISA). Antibodies were

produced either in cell culture or in Balb/C mice by passaging the hybridomas as solid or ascitic tumors, after they had been cloned at least

three times by limiting dilutions in microtiter plates. Specificities of

a number of these **monoclonal** antibodies were determined in the ELISA and in a neutralization test using different **polio** virus subtypes. The results indicate that for epidemiological studies **monoclonal** antibodies may prove to be very useful tools. Also the use of **monoclonal** antibodies for vaccine production (affinity chromatography; characterization of viral substructures) and routine vaccine control purpose (antigen quantification; neutralization of

vaccine virus) seems attractive. Two of the neutralizing **monoclonal** antibodies against **polio** virus type 1, showed a selective immunoprecipitation with VP1, which suggests that VP1 is an important polypeptide for the induction of neutralizing antibody in vivo.